



California Regional Water Quality Control Board

Central Coast Region



Linda S. Adams
Secretary for
Environmental Protection

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Arnold Schwarzenegger
Governor

December 19, 2007

Edward B. Sinnott
Agent for Loretta Sinnott
925 Pine Dr.
Felton, CA 95018

Dear Edward B. Sinnott:

ENROLLMENT OF 1-07-072 SCR SINNOTT UNDER ORDER NO. R3-2005-0066 THE GENERAL CONDITIONAL WAIVER OF WASTE DISCHARGE REQUIREMENTS – TIMBER HARVEST ACTIVITIES IN THE CENTRAL COAST REGION

The purpose of this letter is to notify you that the Central Coast Regional Water Quality Control Board's (Water Board) Executive Officer has enrolled THP No. 1-07-072 SCR SINNOTT under Order No. R3-2005-0066 General Conditional Waiver of Waste Discharge Requirements – Timber Harvest Activities in the Central Coast Region (General Waiver) (Attachment 1).

Please review the attached General Waiver requirements, as you are responsible for complying with all of the prescribed conditions.

MONITORING

California Water Code Section 13269 (2) requires the General Waiver to include performance monitoring for discharges that may pose a significant threat to water quality. Section 13269 (2) also states that monitoring requirements shall be designed to verify the adequacy and effectiveness of the General Waiver's conditions. To determine the adequacy and effectiveness of the General Waiver's conditions, water quality monitoring is required as part of your enrollment under the General Waiver.

The General Waiver requirements establish three different monitoring tiers (I, II, and III) based on the proposed timber harvest activities and site conditions. The Water Board's Executive Officer may modify the monitoring requirements for an individual plan.

Overview of Monitoring Tier requirements:

Tier I: CDF Forest Practice Rules compliance monitoring.
Road inventory program.
Forensic monitoring as necessary.

Tier II: CDF Forest Practice Rules compliance monitoring.

California Environmental Protection Agency

Road inventory program.
Forensic monitoring as necessary.
Visual and photo monitoring of harvest infrastructure.

Tier III: CDF Forest Practice Rules compliance monitoring.
Road inventory program.
Forensic monitoring as necessary.
Visual and photo monitoring of harvest infrastructure.
Water Column monitoring.

Based on the information contained in your timber harvest plan information sheet, you are enrolled under Tier III. Based on the eligibility criteria, your plan has a high cumulative effects ratio 22 percent, a low drainage density index, 65, and a medium soil disturbance factor, 1108 (Exhibit 1 of Attachment 2).

Your Tier III Monitoring and Reporting Program (MRP) is attached (Attachment 2). Please review it carefully. Monitoring must begin at the onset of timber operations. Please inform Water Board staff if you suspect any of the monitoring points might be too difficult to access in inclement weather. You are required to implement the MRP, Road Management Program, Standard Operating Procedure 5.2.3 Photo Documentation Procedure, and Standard Operating Procedures for Instream Turbidity Monitoring until the Executive Officer revises or rescinds it.

Site specific monitoring requirements:

VISUAL: Visual monitoring points shall include the full length of roads, watercourse crossings, landings, skid trails, water diversions, watercourse confluences, known landslides, and all mitigation sites (as documented the CDF approved plan) in the timber harvest plan area.

FORENSIC: As needed.

PHOTO: M1: skid trail above landing A (M1)
X1: new culvert or ford at crossing X1

WATER COLUMN: **Temperature:** Per the requirements for Tier III monitoring in Order No. R3-2005-0066, Monitoring and Reporting Program, Timber Harvest Activities, the discharger is required to monitor temperature continuously in Class I watercourses. Considering the absence of a Class I watercourse within or near the plan area, no temperature monitoring is required as part of the Tier III monitoring for this plan at this time.

Turbidity: Per the requirements for Tier III monitoring in Order No. R3-2005-0066, Monitoring and Reporting Program, Timber Harvest Activities, turbidity monitoring is required for all "newly constructed or reconstructed Class I and II crossings." This plan area has no newly constructed or reconstructed Class I and II crossings and therefore no storm-event based turbidity monitoring is required as part of the Tier III monitoring for this plan at this time.

Turbidity monitoring is still required as part of forensic monitoring requirements.

REPORTING

The reporting requirements for your monitoring program are contained in the MRP and its exhibits. Please review the reporting requirements in your MRP carefully and include all information requested in your reports. Requirements for reporting include specifics on annual reporting as well as events that may be affecting water quality throughout the year:

- Providing an annual report by November 15 of each year.
- Status of active timber harvest operations.
- Forest Practice Rules violation reporting.
- Sediment release reporting.

Please provide monitoring reports to us in a timely manner. Failure to provide reports may subject you to civil liability per California Water Code Section 13268.

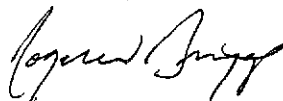
In addition to your reporting requirements, you must maintain a logbook with all monitoring and water quality analysis data; road inventory program reports; and findings from visual monitoring. You must keep logbooks up to date and available for review upon request by Water Board staff.

The goal of the Regional Water Quality Control Board is protection of water quality and its beneficial uses. Please work proactively with us when dealing with water quality issues. We encourage you to seek our input and assistance when performing road repairs, crossing modifications, and other mitigation work (unstable slopes, etc.) You must, as outlined in the attached monitoring and reporting program, report water quality problems you notice during inspections and maintenance (timber or non-timber related). We may be able to assist the work you do with funding from grants and other programs. Our job is to help you manage your land in a way that minimizes the risk to water quality. Please do not hesitate to contact us if you have any questions or concerns.

If any of this is unclear to you, please contact the Water Board immediately.

Comments or questions regarding this matter should be directed to **Julia Dyer** at **jdyer@waterboards.ca.gov** or **805-594-6144**.

Sincerely,



Roger W. Briggs
Executive Officer

Attachments:

1. General Conditional Waiver of Waste Discharge Requirements – Timber Harvest Activities in the Central Coast Region
2. Monitoring and Reporting Program for 1-07-072 SCR SINNOTT with Exhibits 1 - 3.

CC: Jim Hildreth
P.O. Box 1224
Capitola, CA. 95010

E-mail: Donna Bradford
County of Santa Cruz
donna.bradford@co.santa-cruz.ca.us

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**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

ORDER NO. R3-2005-0066

**GENERAL CONDITIONAL WAIVER OF WASTE DISCHARGE
REQUIREMENTS – TIMBER HARVEST ACTIVITIES
IN THE CENTRAL COAST REGION**

(Revised on July 8, 2005)

WHEREAS, the California Regional Water Quality Control Board, Central Coast Region (hereinafter Regional Board or Central Coast Water Board), finds that:

1. California Water Code (CWC) Section 13260(a) requires that any person discharging waste or proposing to discharge waste within any region that could affect the quality of the waters of the State, other than into a community sewer system, shall file with the appropriate Regional Board a report of waste discharge (ROWD) containing such information and data as may be required by the Regional Board.
2. The Central Coast Water Board prescribes waste discharge requirements except where the Central Coast Water Board finds that a waiver of waste discharge requirements for a specific type of discharge is in the public interest pursuant to CWC (Sections 13267 and 13269).
3. CWC Section 13267 states:

(a) A regional board, in establishing or reviewing any water quality control plan or waste discharge requirements, or in connection with any action relating to any plan or requirement authorized by this division, may investigate the quality of any waters of the state within its region.

(b)(1) In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

4. CWC Section 13269(a) states:

(1) On and after January 1, 2000, the provisions of subdivisions (a) and (c) of Section 13260, subdivision (a) of Section 13263, or subdivision (a) of Section 13264 may be waived by the state board or a regional board as to a specific discharge or type of discharge if the state board or a regional board determines, after any necessary state board or regional board meeting, that the waiver is consistent with any applicable state or regional water quality control plan and is in the public interest. The state board or a regional board shall give notice of any necessary meeting by publication pursuant to Section 11125 of the Government Code.

(2) A waiver may not exceed five years in duration, but may be renewed by the state board or a regional board. The waiver shall be conditional and may be terminated at any time by the state board or a regional board. The conditions of the waiver shall include, but need not be limited to, the performance of individual, group, or watershed-based, monitoring, except as provided in paragraph (3) below. Monitoring requirements shall be designed to support the development and implementation of the waiver program, including, but not limited to, verifying the adequacy and effectiveness of the waiver's conditions. In

establishing monitoring requirements, the regional board may consider the volume, duration, frequency, and constituents of the discharge; the extent and type of existing monitoring activities, including, but not limited to, existing watershed-based, compliance, and effectiveness monitoring efforts; the size of the project area; and other relevant factors. Monitoring results shall be made available to the public.

(3) The state board or a regional board may waive the monitoring requirements described in this subdivision for discharges that it determines do not pose a significant threat to water quality.

5. The Central Coast Water Board, in compliance with CWC Section 13269, reviewed the previously issued categorical waiver for timber harvest activities (Central Coast Water Board Resolution No. 89-04, Water Quality Control Plan (Basin Plan) Appendix A-23) and determined that it should not be renewed.
6. In accordance with CWC Section 13269, the Central Coast Water Board shall regulate discharge of waste associated with timber harvest activities through the requirements of this general conditional waiver, or, for timber operations that are not eligible for this waiver, through individual waste discharge requirements or individual conditional waivers.
7. The Central Coast Water Board has adopted the Basin Plan for the Central Coast Region, that establishes beneficial uses, water quality objectives, waste discharge prohibitions, and implementation policies that apply to waters of the State and discharges to waters of the State within the Central Coast Region.
8. Pursuant to the Basin Plan and State Board Plans and Policies, including State Water Board Resolution No. 88-63, the existing and potential beneficial uses of waters potentially affected by the proposed activity include:
 - a. Agricultural Supply (AGR)
 - b. Aquaculture (AQUA)
 - c. Preservation of Biological Habitats of Special Significance (BIOL)
 - d. Cold Freshwater Habitat (COLD)
 - e. Commercial and Sportfishing (COMM)
 - f. Estuarine Habitat (EST)
 - g. Freshwater Replenishment (FRSH)
 - h. Ground Water Recharge (GWR)
 - i. Industrial Service Supply (IND)
 - j. Migration of Aquatic Organisms (MIGR)
 - k. Municipal and Domestic Supply (MUN)
 - l. Navigation (NAV)
 - m. Hydropower Generation (POW)
 - n. Industrial Process Supply (PRO)
 - o. Rare, Threatened, or Endangered Species (RARE)
 - p. Water Contact Recreation (REC-1)
 - q. Non-contact Water Recreation (REC-2)
 - r. Shellfish Harvesting (SHELL)
 - s. Spawning, Reproduction, and Development (SPWN)
 - t. Warm Freshwater Habitat (WARM)
 - u. Wildlife Habitat (WILD)
 - v. Inland Saline Water Habitat (SAL)
9. The Basin Plan contains water quality objectives developed to protect the above-listed beneficial uses of water. The factors in CWC Section 13241, including economic considerations, were considered as required by law during the development of these objectives. Prohibitions, provisions, and specifications contained in this Order implement these previously developed water quality objectives. Compliance with water quality objectives will protect the beneficial uses listed in the above paragraph.

10. The California Department of Forestry and Fire Protection (CDF) and the California Board of Forestry (BOF) regulate timber harvest activities on nonfederal lands in accordance with the Z'berg-Nejedly Forest Practice Act (Public Resources Code, Section 4511 et seq.) and the California Forest Practice Rules (Title 14, California Code of Regulations, Section 895 et seq.). CDF is the state agency with primary jurisdiction over timber activities. The Central Coast Water Board cannot issue permits to allow timber harvesting, but only regulates water quality impacts of harvesting operations that have received a permit from CDF. CDF issues such permits by approving timber harvest plans or non-industrial timber management plans. The Central Coast Water Board does not have legal authority to require an alternative project.
11. In 1988, the State Water Board:
 - (a) Conditionally certified the "Water Quality Management Plan for Timber Operations on Nonfederal Lands" which included those California Forest Practice Rules selected as best management practices and the process by which those rules are administered
 - (b) Designated CDF and the BOF as joint Water Quality Management Agencies (WQMA)
 - (c) Executed a Management Agency Agreement with CDF and BOF for the purpose of implementing the certified plan and WQMA designations
12. The Management Agency Agreement between the State Water Board and CDF/BOF required a formal review of the California Forest Practice Rules and administering processes no later than six years from the date of certification. To date, the State Water Board and CDF/BOF have not completed that review.
13. The USEPA has not approved the State Water Board's certification of the California Forest Practice Rules and administering processes for regulation of timber harvest activities on nonfederal lands in California.
14. The Central Coast Water Board, in accordance with the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) (CEQA), has conducted an Initial Study in accordance with Title 14, California Code of Regulations, Section 15063.
15. The Secretary of the Resources Agency has certified that the CDF's timber harvest plan regulatory program can function as a substitute for an Environmental Impact Report or a negative declaration (CEQA Guidelines § 15251.) Registered Professional Foresters submit either a timber harvest plan (THP) or Non-Industrial Timber Management Plan (NTMP) and only CDF has the authority to grant discretionary approval for projects. CDF considers all the significant environmental effects of the project and makes a finding under CEQA Guidelines section 15091 for each significant effect. If CDF finds that the timber operations will not have a significant effect on the environment, a THP or NTMP serves as a substitute negative declaration. If CDF finds that the timber operations may have a significant effect on the environment, the THP or NTMP serves as a substitute environmental impact report, and includes mitigation of potential impacts. CDF consults with the Central Coast Water Board when a THP or NTMP is developed. This waiver requires each enrolled Discharger to comply with all requirements of the respective THP or NTMP.
16. Relevant factors in determining whether a project covered by a general conditional waiver is in the public interest include the following:
 - Whether the discharge is already regulated by another governmental entity;
 - Whether the discharger will observe reasonable practices to minimize the deleterious effects of the discharge;
 - Whether a feasible treatment method exists to control the pollutants in the discharge;
 - Whether a resource agency (California Department of Fish and Game, County of San Mateo, Santa Cruz, Santa Clara, Monterey, San Benito, San Luis Obispo, Santa Barbara, or Ventura) has filed a water quality related non-concurrence with CDF regarding the proposed harvest and that non-

- concurrency has not been resolved; and
 - Whether conditionally waiving ROWDs and/or waste discharge requirements will adequately protect beneficial uses while allowing the Central Coast Water Board to utilize more of its scarce resources to conduct field oversight, public outreach and, where necessary, enforcement.
17. The timber harvest plan regulatory program is regulated by the California Department of Forestry, and requires the Discharger to implement practices to control water quality impacts, including erosion and sedimentation. Local ordinances also require various controls. The conditions of this Order protect beneficial uses by:
- (i) Prohibiting pollution, contamination or nuisance;
 - (ii) Requiring monitoring and compliance with applicable water quality control plans;
 - (iii) Requiring the Discharger to grant access to Central Coast Water Board staff to perform inspections; and
 - (iv) Requiring approval of the THP or NTMP by the California Department of Forestry and Fire Protection.
18. The Central Coast Water Board finds that the adoption of the "General Conditional Waiver of Waste Discharge Requirements - Timber Harvest Activities" will not have a significant impact on the environment and will be in the public interest provided that dischargers:
- (a) Comply with the conditions of this Order; and
 - (b) File with the Central Coast Water Board the applicable eligibility documents as described herein, to demonstrate that compliance with the waiver conditions will be achieved; and
 - (c) Comply with applicable State Water Board and Central Coast Water Board plans and policies and as those plans and policies may be amended from time to time through the amendment process;
19. Pursuant to CWC Section 13269, this action waiving the issuance of waste discharge requirements for certain specific types of discharges: (a) is conditional, (b) may be terminated at any time, (c) does not permit an illegal activity, (d) does not preclude the need for permits which may be required by other local or governmental agencies, and (e) does not preclude the Central Coast Water Board from administering enforcement remedies (including civil liability) pursuant to the CWC.
20. A waiver of waste discharge requirements for a type of discharge may be superseded by the adoption by the State Water Board or Central Coast Water Board of specific waste discharge requirements or general waste discharge requirements for that type of discharge.
21. Management practices are the most feasible treatment method to control the discharges. If a proposed timber harvest is conducted in the manner prescribed in the THP or NTMP and the conditions of this Order, a waiver of waste discharge requirements is in the public interest and is consistent with applicable water quality control plans, including the Water Quality Control Plan, Central Coast Region.
22. The winter period for the Central Coast Region shall be October 15 through April 15.
23. The rain year for the Central Coast Region shall be July 1 through June 30.
24. The results from the Eligibility Criteria for a specific THP or NTMP will function as a minimum level for establishing monitoring requirements for that THP or NTMP.

25. Tier III monitoring is required if ground based equipment is used off of an all weather road during the period October 15 to May 1. Tier III monitoring is required for the next 24 months (until July 31, 2007) for all THPs or NTMPs that fall into Tier II or III.
26. The Central Coast Water Board has adopted a Negative Declaration in accordance with CEQA and the CEQA Guidelines (Title 14, California Code of Regulations, Section 15000 et seq.). The Negative Declaration concludes that the waiver of waste discharge requirements for specific types of timber harvest operations pursuant to this Order will not have a significant impact on the environment.
27. Copies of the proposed Order and monitoring and reporting plan were transmitted to all agencies and persons known to be interested in this matter according to the applicable provisions of CEQA.
28. The Central Coast Water Board conducted a public hearing on July 8, 2005 in San Luis Obispo, California, and considered all testimony and evidence concerning this matter;

THEREFORE IT IS HEREBY ORDERED:

1. In accordance with CWC Section 13269, the waste discharges related to timber harvest activities in the Central Coast Region, that are not subject to individual conditional waivers or waste discharge requirements, shall be regulated by general conditional timber harvest waiver requirements, and waste discharge requirements and the requirement to submit a report of waste discharge are hereby waived subject to the following conditions:
 - a. "Discharger" means the landowner and anyone working on behalf of the landowner in the conduct of timber harvest activities.
 - b. The Discharger shall submit a Notice of Intent (NOI) on the attached form (Attachment A) or on such other form that the Executive Officer requires. This waiver shall not take effect as to a particular timber operation until the Executive Officer approves the NOI in writing.
 - c. The Discharger shall comply with all requirements of applicable water quality control plans (examples shown in Attachment B) as these may be modified from time to time pursuant to amendments to water quality control plans adopted by the Central Coast Water Board and approved by the State Water Resources Control Board (State Water Board) and water quality control plans and policies adopted by the State Water Board.
 - d. The Discharger shall obtain CDF approval of a THP and/or NTMP for the timber harvest activities before enrollment in this waiver takes effect. The Discharger shall conduct timber harvest activities in accordance with the approved THP or NTMP and with all applicable sections for the Forest Practice Rules.
 - e. Discharger shall notify the Central Coast Water Board concurrently when submitting a request to CDF for a minor or major amendment.
 - f. The Discharger shall obtain and comply with all local, state and federal permits required by law. The Discharger shall comply with all applicable county ordinances related to timber operations, including zoning ordinances.
 - g. The Discharger shall not create a condition of pollution, contamination, or nuisance, as defined by CWC Section 13050.
 - h. The Discharger shall not discharge any waste not specifically regulated by this Order, except in compliance with CWC Section 13264. Waste specifically regulated by this Order includes: earthen

materials including soil, silt, sand, clay, rock; organic materials such as slash, sawdust, or bark. Examples of waste not specifically regulated by this Order include petroleum products, hazardous materials, or human wastes.

- i. The Discharger shall not cause alteration in stream temperature that exceeds Basin Plan requirements.
 - j. The Discharger shall allow Central Coast Water Board staff reasonable access, in accordance with Public Resources Code section 4604(b) and California Water Code section 13267, onto the affected property for the purpose of performing inspections to determine compliance with the conditional waiver requirements.
 - k. Pursuant to California Water Code Section 13267, the discharger shall comply with Monitoring and Reporting Program No. R3-2005-0066. The Central Coast Water Board needs this information to verify that a general conditional waiver of waste discharge requirements is the appropriate regulatory tool for Timber Harvest activities in San Mateo, Santa Cruz, Santa Clara, Monterey, San Benito, San Luis Obispo, Santa Barbara, and Ventura counties. Evidence that supports the need for this information was presented at the July 8, 2005 meeting of the Central Coast Water Board, the staff report for Item 26 at that meeting, and Monitoring and Reporting Plan No. R3-2005-0066.
 - l. This Order does not regulate point-source discharges that require an NPDES permit under the Clean Water Act, including but not limited to silvicultural point-source discharges as defined in 40 CFR Chapter 1 Part 122.27.
 - m. The Discharger shall take immediate action to repair failed crossings, culverts, roads and other sources of sediment.
 - n. All erosion and sediment control devices, management measures and mitigations prescribed in a THP or NTMP shall be maintained in good working order for the term of the general waiver requirements.
 - o. The Discharger shall comply with all requirements of the Executive Officer pursuant to MRP R3-2005-0066.
2. The Central Coast Water Board, based on the above-noted facts and findings, determines that it is not necessary at this time to adopt individual or general waste discharge requirements for waste discharges related to timber harvest activities that meet the conditions specified in this waiver and which are conducted in accordance with the requirements specified in this waiver.
 3. This Waiver shall not create a vested right and all such discharges shall be considered a privilege, as provided for in CWC Section 13263.
 4. The Executive Officer shall not approve the NOI or shall terminate the applicability of a waiver to specific timber harvest activities (as applicable) if the Executive Officer makes any of the following determinations:
 - a. The timber harvest activity is not in compliance with any applicable condition of this waiver.
 - b. The timber harvest activity has varied in whole or in any part from the approved THP or NTMP, unless these changes result in better protection of water quality.
 - c. The timber harvest activity is likely to adversely affect the quality or beneficial uses of waters of the State. In making this determination, the Executive Officer shall consider, at a minimum, the THP or NTMP, information from the pre-harvest inspection or other site inspections, the Notice of Intent, the Eligibility Criteria (Exhibit 1 to MRP R3-2005-0066), and all available monitoring reports.

July 8, 2005

5. Upon receipt of notice of termination of applicability of the waiver, the discharger shall immediately cease all timber harvest activities that may result in discharges to waters of the State, other than activities necessary to control erosion. Upon notice of termination, the discharger must file a report of waste discharge and applicable filing fee. Timber harvest activities that may result in discharges that could affect the quality of waters of the State may commence only upon enrollment by the Executive Officer under general waste discharge requirements, the adoption by the Central Coast Water Board of an individual waiver of waste discharge requirements or individual waste discharge requirements, or in accordance with CWC Section 13264(a).
6. This general conditional waiver shall become effective on July 8, 2005, and shall expire on July 8, 2010, unless terminated or renewed by the Central Coast Water Board. The Central Coast Water Board may terminate this waiver at any time, either as to a particular timber harvest or in its entirety.
7. As provided by CWC Section 13350(a), any person who, in violation of any waiver condition, discharges waste, or causes or permits waste to be deposited where it is discharged, into the waters of the state, is subject to administrative or civil liability for the violation.
8. Any person affected by this action of the Central Coast Water Board may petition the State Water Board to review the action in accordance with section 13320 of the California Water Code and Title 23, California Code of Regulations, Section 2050. The petition must be received by the State Water Board within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request.

I, Roger W. Briggs, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on July 8, 2005.



Roger W. Briggs, Executive Officer

7-29-05

Date

**MONITORING AND REPORTING PROGRAM
ORDER NO. R3-2005-0066**

**FOR THE GENERAL CONDITIONAL WAIVER OF
WASTE DISCHARGE REQUIREMENTS – TIMBER HARVEST ACTIVITIES IN
THE CENTRAL COAST REGION
TIER III MONITORING FOR 1-07-072 SCR SINNOTT**

December 19, 2007

Your plan is enrolled in Tier III monitoring. THPs that are categorized by the eligibility criteria as Tiers II or III cannot be downgraded to a lower category based on other criteria. The Water Board's Executive Officer may not change the monitoring requirements so they are less stringent than the requirements in the designated tier from the eligibility criteria

This Monitoring and Reporting Program Order No. R3-2005-0066 (MRP) is issued pursuant to Water Code sections 13267 and 13269. Failure to comply with this MRP may subject the Discharger to monetary civil liability in accordance with Water Code section 13268 and 13350. Monitoring shall begin at the onset of timber harvest operations and must comply with this MRP and any subsequent revisions. Monitoring shall continue until this MRP is rescinded.

The Water Board's Executive Officer determines which monitoring tier applies to a THP after considering the THP, information from the pre-harvest inspection or other site inspections, the Timber Harvest Information Form and Fact Sheet, and the Eligibility Criteria (attached in Exhibit 1).

SITE SPECIFIC MONITORING LOCATIONS FOR TIER III MONITORING

This MRP takes into account specific site conditions and mitigations to establish monitoring locations (see attached map, Exhibit 2 Monitoring Locations) that will provide functional monitoring information. The Discharger¹ is required to perform monitoring at these locations as described below in Section I – Implementation and Effectiveness Monitoring and Monitoring Frequency; Section II – Data Logging and Reporting; and Section III – Standard Provisions.

VISUAL MONITORING POINTS: The Discharger is required to conduct visual monitoring at the points listed below.

¹ "Discharger", "you", or "your" means the landowner and anyone working on behalf of the landowner in the conduct of timber harvest activities.

**Monitoring and Reporting Program Timber Harvest Activities
Order NO. R3-2005-0066**

1-07-072 SCR SINNOTT

Attachment 2

Visual monitoring points shall include the full length of roads, watercourse crossings, landings, skid trails, water diversions, watercourse confluences, known landslides, and all mitigation sites in the Timber Harvest Plan (THP) area (as documented the CDF approved THP).

PHOTO-MONITORING POINTS: The Discharger is required to monitor Photo-monitoring points listed below (guidelines in Exhibit 3). Photo-monitoring points:

M1: skid trail above landing A (M1)

X1: new culvert or ford at crossing X1

WATER COLUMN MONITORING POINTS: The Discharger is required to measure instream temperature and turbidity conditions at the following water column monitoring points:

Temperature: Per the requirements for Tier III monitoring in Order No. R3-2005-0066, Monitoring and Reporting Program, Timber Harvest Activities, the discharger is required to monitor temperature continuously in Class I watercourses. Considering the absence of a Class I watercourse within or near the plan area, no temperature monitoring is required as part of the Tier III monitoring for this plan at this time.

Turbidity: Per the requirements for Tier III monitoring in Order No. R3-2005-0066, Monitoring and Reporting Program, Timber Harvest Activities, turbidity monitoring is required for all "newly constructed or reconstructed Class I and II crossings." This plan area has no newly constructed or reconstructed Class I and II crossings and therefore no storm-event based turbidity monitoring is required as part of the Tier III monitoring for this plan at this time.

Turbidity monitoring is still required as part of forensic monitoring requirements.

CDF FOREST PRACTICE RULES COMPLIANCE MONITORING: The Discharger is responsible for and is required to ensure timber harvest activities are conducted in accordance with the approved THP and with all applicable sections of the Forest Practice Rules. This includes allowing site access for compliance inspections by California Department for Forestry and Fire Protection and Central Coast Regional Water Quality Control Board pursuant to 40 CFR Article 8, Section 4604.

Monitoring and Reporting Program Timber Harvest Activities
Order NO. R3-2005-0066

1-07-072 SCR SINNOTT

Attachment 2

ROAD INVENTORY PROGRAM: The Discharger is required to develop and implement a Roads Management Program (example attached in Exhibit 2, Big Creek Road Inventory Program) within the THP area. The road management program must be approved by the Water Board's Executive Officer prior to implementation.

FORENSIC MONITORING: The Discharger is required to conduct forensic monitoring as described in Section I below.

SECTION I – IMPLEMENTATION AND EFFECTIVENESS MONITORING AND MONITORING FREQUENCY

VISUAL MONITORING

VISUAL MONITORING POINTS: Visual monitoring points must include the full length of roads, watercourse crossings, landings, skid trails, water diversions, watercourse confluences, known landslides, and all mitigation sites (as documented in the CDF approved THP) in the plan area. Visual monitoring points must be at locations within the timber harvest plan area where timber harvest activities have the greatest risk of potential discharge (sites may be established by the Water Board's Executive Officer during or after the pre-harvest inspection).

VISUAL MONITORING FREQUENCY: The Discharger is required to monitor all visual monitoring points established by the Water Board's Executive Officer during or after the pre-harvest inspection for existing or potential sources of erosion. The Discharger is required to perform visual monitoring within 12 to 24 hours of storm events of two inches of rain or greater within a 24-hour period.

"Year One" – You are required to monitor a minimum of three times over each 12 months during "Year One" monitoring. "Year One" monitoring begins with the onset of timber harvest operations. "Year One" monitoring then continues during the entire length of time active timber harvest operations occur plus one year past the end of active timber harvest operations.

Monitoring Event One:

The Discharger is required to perform the first monitoring event within 12 to 24 hours of the first storm event that yields two inches of rain or greater within a 24-hour period.

Monitoring Events Two and Three:

The Discharger is required to perform the next two monitoring events within 12 to 24 hours of the next two storm events (one monitoring event each storm) that yield two inches of rain or greater within a 24-hour period and soil saturation after the start of the winter period on October 15.

Years Two - Five – In years two through five, following completion of timber harvest operations and a determination by the Water Board's Executive Officer that implemented management practices are functioning to protect water quality and beneficial uses (as documented by information contained in the annual

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report and post-harvest inspection conducted by Water Board staff), visual monitoring shall be implemented according to the Road Management Program developed by the Discharger and approved by the Water Board's Executive Officer (example attached in Exhibit 3, Big Creek Road Inventory Program).

It is your responsibility to schedule a post-harvest inspection with Water Board staff. You may call to schedule an inspection no sooner than 10 months after the timber harvest plan is complete.

Important Note: You may not begin Year Two monitoring until you are directed to do so in writing by the Water Board's Executive Officer.

If implemented management practices are not adequately protecting water quality and beneficial uses, as determined by the Water Board's Executive Officer, the Discharger is required to repeat "Year One" monitoring. In addition to supplementary monitoring, the Water Board's Executive Officer will determine additional management measure implementation required.

Summary of Visual Monitoring Frequency:

"Year One": minimum of three events

Years Two – Five: consistent with the Road Management Program developed by the Discharger and approved by the Water Board's Executive Officer.

PHOTO-MONITORING

PHOTO-MONITORING POINTS: Photo-monitoring points shall be at locations within the timber harvest plan area where timber harvest activities have the greatest risk of potential discharge (sites may be established by the Water Board's Executive Officer during or after the pre-harvest inspection). Photo-monitoring points must include **sites** up and down stream of each newly constructed or reconstructed Class I and Class II watercourse crossings and landings within a Class I or II Watercourse or Lake Protection Zone (WLPZ). Monitoring photos need to be of sufficient quality to record the effectiveness of the implemented management practice.

The Discharger must:

- i. Utilize the attached document titled "Standard Operation Procedure 5.2.3 - Photo Documentation Procedure" (including any subsequent revisions to SOP 5.2.3) as the protocol for all photo-monitoring (attached in Exhibit 3).

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- ii. Utilize flagging, rebar, or another method of establishing the photo-monitoring point site locations.
- iii. Utilize all photo-monitoring point locations until this Monitoring and Reporting Program is revised or rescinded.

PHOTO-MONITORING FREQUENCY: The Discharger is required to monitor all photo-monitoring points established by the Water Board's Executive Officer during or after the pre-harvest inspection.

"Year One" - You are required to photo-monitor according to the following four conditions during "Year One" monitoring.

- Prior to the onset of timber harvest operations as baseline monitoring. (One Photo Set)
- Following the first significant storm event (First Storm) (One Photo Set).
- Following completion of timber harvest activities (One Photo Set).
- Following a significant storm event during the month of April (April Storm) (One Photo Set). A significant storm event means any storm with two inches of rain or greater within a 24-hour period and soil saturation (i.e., soil saturation typically occurs after a minimum of four inches of precipitation after the start of the winter period on October 15).

Additionally, the Discharger shall photograph new or reconstructed Class I and Class II water crossings:

- Before construction begins, after construction is completed, and after the crossing structure is removed (if crossing is temporary).

You are required to conduct photo-monitoring within seven days of all of the following:

1. The first storm.
2. Completion of timber harvest activities.
3. April storm events. If no significant storm event occurs in the month of April, the Discharger must complete photo-monitoring by April 30 of the same year.

Years Two and 5 - In years two and five, following completion of timber harvest operations and a determination by the Water Board's Executive Officer that implemented management practices are functioning to protect water quality and beneficial uses (as documented by information contained in

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the annual report and a post-harvest inspection conducted by Water Board staff), the Discharger must conduct the April storm photo-monitoring.

It is your responsibility to schedule a post-harvest inspection with Water Board staff. You may call to schedule an inspection no sooner than 10 months after the timber harvest plan is complete.

Important Note: You may not begin Year Two monitoring until you are directed to do so in writing by the Water Board's Executive Officer.

If implemented management practices are not adequately protecting water quality and beneficial uses, as determined by the Water Board's Executive Officer, the Discharger must repeat "Year One" monitoring. In addition to supplementary monitoring, the Water Board's Executive Officer will determine additional management measure implementation required.

Summary of Photo-monitoring Frequency:

"Year One": 2 photo sets (minimum)
Year Two: 1 photo set
Year Five: 1 photo set

TURBIDITY MONITORING

TURBIDITY MONITORING POINTS: The Discharger is required to monitor turbidity as prescribed for forensic monitoring consistent with the requirements in the document Central Coast Regional Water Quality Control Board, Timber Harvest Program, Standard Operating Procedures for Instream Turbidity Monitoring (October 2006) (attached in Exhibit 3).

TURBIDITY MONITORING FREQUENCY: Based on site specific conditions as described for forensic monitoring.

FORENSIC MONITORING

1. If at any time during implementation or effectiveness monitoring, the Discharger observes failed management measures and/or source of discharge, the Discharger is required to conduct forensic monitoring to identify the source. Management measure failure is defined as: 1) whenever an implemented management measure creates a condition of pollution, contamination, or condition of nuisance, as defined by CWC Section 13050, or 2) when lack of implementation of a necessary

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management measure creates a condition of pollution, contamination, or condition of nuisance, as defined by CWC Section 13050.

2. If management measures fail (this includes failure to implement appropriate management measures as determined by CDF and documented by CDF as a violation of the Forest Practice Rules) the Discharger is required to photo² document them and is required to implement management practices immediately to prevent discharge and impacts to water quality.
3. If timber activities cause a discharge (sediment, soil, other organic material, etc.) into waters of the State, the Discharger is required to measure in-stream turbidity (using grab samples) at the point of discharge into waters of the state. If there is a discharge into a Class III watercourse and water is no longer flowing, the Discharger is required to measure in-stream turbidity in the closest Class I or Class II watercourse downstream of the discharge.
4. If at any time during implementation or effectiveness monitoring, the Discharger observes a discharge (sediment, soil, other organic material, herbicides, pesticides, fluids from timber equipment (oil, hydraulic fluid, etc), etc.), the Discharger is required to notify the Water Board within 24 hours.
5. The Discharger is required to submit to the Water Board a written report, including photo documentation, water quality data, and the management measures or corrective actions and a description of their effectiveness within 10 working days. Upon review of the report, the Water Board's Executive Officer will determine completeness of the report and the need for additional actions necessary for the protection of water quality and beneficial uses.

FORENSIC MONITORING AREAS OF CONCERN: The following areas must be addressed during forensic monitoring if water diversion, feral pig activity, or trespass activity are causing or threatening to cause impacts to water quality.

Water Diversion: The Discharger is required to monitor the water diversion point(s) for total daily water usage when water is being diverted. The Discharger is required to monitor the creek to ensure no more than 10% of the creek flow is diverted.

Feral Pig Activity: During any inspection, the Discharger is required to document all evidence of feral pig activity near watercourses that may be contributing discharges to waters of the state. The Discharger must address the feral pig activity according to forensic monitoring requirements described in 1 – 5 above.

² Monitoring photos need to be of sufficient quality to record the effectiveness of the implemented management practice.

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Trespass Activity: During any inspection, the Discharger is required to document all evidence of trespass activity near watercourses that may be contributing discharges to waters of the state. The Discharger must address the trespass activity according to forensic monitoring requirements described in 1 – 5 above.

FORENSIC MONITORING FREQUENCY: The frequency of Forensic Monitoring is coincident with implementation and effectiveness monitoring, or at any time a failed management measure and/or discharge is reported or observed.

SECTION II - DATA LOGGING AND REPORTING

LOGBOOKS: The Discharger is required to maintain logbooks for recording all visual and water analysis data. Logbooks are required to include documentation of maintenance and repair of management practices. These logbooks must be available for inspection to the Water Board staff.

HEALTH AND SAFETY: The Discharger is responsible for ensuring that all monitoring is done in a safe manner. If any monitoring point is too dangerous to sample, then the Discharger is required to report this circumstance to the Water Board within 48 hours.

ROAD MANAGEMENT PROGRAM: The Discharger is required to develop and implement a Roads Management Program (example attached in Exhibit 3, Big Creek Road Inventory Program) within the THP area. Prior to implementation, the road management program must be approved by the Water Board's Executive Officer. After each storm event that triggers an inspection, the Discharger is required to perform a field inspection and prepare a field form as described in the protocol for the road management program. The Discharger is required to enter the data into a logbook (same as described in item a. above) and database or spreadsheet which tracks observations, work completed, and dates of last review. If the need for repair is immediate, the Discharger is required to promptly develop an appropriate treatment so that the Discharger can complete corrective action as soon as practical.

SEDIMENT RELEASE REPORTING: The Discharger is required to report to the Water Board within 48 hours whenever at least one cubic yard of soil is released to a waterway due to anthropogenic causes or at least five cubic yards of soil is released to a waterway due to natural causes, or when turbidity is noticeably greater downstream compared to upstream (of a crossing or the Plan area). The Discharger is required to submit a written report to the Water Board within 10 days of detection. The Discharger is required to investigate source areas of sediment. If sources are found, the Discharger will locate and document the source and size of the release. If sources related to timber harvest activities are found, the Discharger is required to immediately correct the source if possible, or schedule corrective action at an appropriate time given the site conditions.

VIOLATION REPORTING: The Discharger is required to report any violation of the Forest Practice Rules, to the Water Board within 48 hours. The Discharger is required to provide the report in writing to the Water Board within 10 working days of the violation. The written report must include photo documentation and water quality data (if discharge enters waters of the state) before and after remedial action. Upon review of the report, the Water Board's Executive Officer

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will determine completeness of the report and the need for additional actions necessary for the protection of water quality and beneficial uses. The Discharger is required to complete any additional monitoring the Water Board's Executive Officer determines is necessary.

ANNUAL REPORTING: By November 15 of each year, the Discharger is required to submit an Annual Report to the Water Board using the template that can be downloaded from:

<http://www.waterboards.ca.gov/centralcoast/Facilities/TimberHarvest/index.htm>

Under "Monitoring and Reporting" click on "Annual Report Template." In addition to the reporting requirements already set forth in the MRP, the annual report must address each of the following³:

Annual Reports must include all of the following:

General

- ❖ The name and address of the person submitting the report as well as the day, month, and year in which the report is being submitted at the top of the first page.
- ❖ The subject line of the annual report must state the THP number, three-letter county code, plan name as it appears in the approved THP, NTO number, and specific units within the THP that have been enrolled under the General Waiver.
- ❖ Time period during which the data was collected.
- ❖ List Tier level and summarize the monitoring requirements.
- ❖ A status of active timber harvest operations including:
 - Day, month, and year the harvest opened and closed for the season.
 - Previous year activities (types of activities, locations, percent harvested, area of harvest, and extent of overall plan completion)
 - Planned activities including estimated month and year harvests activities must resume.
 - Estimated month and year harvesting will be completed.
 - Wet weather problems observed
 - Any other critical information
- ❖ A summary of all violations. If there were no violations, please state it as such.

³ Portions of these requirements and sections of the template may not apply to your specific MRP (e.g. If your MRP does not require temperature monitoring, the temperature monitoring requirements should be ignored).

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- ❖ Detailed documentation of rainfall measurement procedures and locations or a reference to the page number in the THP where this is described. Describe the type of rain gauge(s) used. If applicable include the link to the Web site where data for the rain gauge may be viewed.
- ❖ With the first annual report, a copy of the road management program.
 - A summary of the road management program⁴ and actions implemented for the protection of water quality and beneficial uses.
- ❖ Recommendations for improving the monitoring and reporting program.

Water Quality Monitoring (if required)

- ❖ A summary of the water quality monitoring performed during the previous year. Any monitoring described in the summary must also include an electronic submittal of the data.
- ❖ A detailed map with the following specifications:
 - In color (if possible).
 - Title stating: "Water Quality Monitoring Locations for THP No. XXXX"
 - All monitoring locations and routes clearly marked with unique site identification tags.
 - A Key or Legend identifying all monitoring locations and routes.
 - North Arrow.
 - Scale

Visual Monitoring

- ❖ *A summary of all visual monitoring activities performed during the previous year.*
 - Summary must include dates and times visual monitoring occurred and any corrective actions taken during inspections.
 - Attach inspection forms or copies of logbook pages detailing inspections.

Photo-monitoring (if required)

- ❖ Submittal of all data and photos in electronic format.

⁴ Big Creek's Road Inventory Program may be used as a model.

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Turbidity Monitoring (if required)

- ❖ All data submitted electronic format compatible with Excel.
- ❖ Make and model of turbidimeter being used.
 - Copy of the manufacture's protocol / recommendation for proper use of the turbidimeter.
- ❖ A summary of all turbidity monitoring activities performed during the previous year.
- ❖ Completed Field Data Sheet with data from all monitoring events. (if more than four events, there is no need to complete top section on additional pages)

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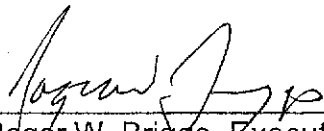
Attachment 2

SECTION III - STANDARD PROVISIONS

1. The Water Board shall be allowed:
 - a. Entry upon premises where timber harvest activities occur;
 - b. Access to copy any records that must be kept under the conditions of these requirements;
 - c. To inspect any timber harvest activity, equipment (including monitoring and control equipment), practices, or operations regulated or required under these requirements; and,
 - d. To photograph, sample, and monitor for the purpose of showing timber harvest requirements compliance.
2. The Discharger is required to maintain records of all monitoring information and results. Records must be maintained for a minimum of three years after the MRP is rescinded. This period may be extended during the course of any unresolved litigation or when requested by the Water Board.
3. Any person signing a report must make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

The Water Board's Executive Officer may modify or rescind this Monitoring and Reporting Program at any time, or may modify or rescind the monitoring and reporting program as to a specific Discharger. Any such modification or rescission must comply with California Water Code section 13269 or 13267.


Roger W. Briggs, Executive Officer

12-18-07
Date

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Exhibits:

Exhibit 1

Inspection Report(s)

Copy of the Timber Harvest Plan Information Form and Fact Sheet

Eligibility Criteria

Exhibit 2

Monitoring Locations

Exhibit 3

Big Creek Road Inventory Program

Standard Operating Procedure 5.2.3 Photo Documentation Procedure

Standard Operating Procedures Instream Turbidity Monitoring

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Exhibit 1

Inspection Report(s)
Copy of the Timber Harvest Information Form and Fact Sheet
Eligibility Criteria

Memo

To: File – Timber Harvest Plan 1-07-072 SCR SINNOT

From: Julia Dyer

CC: Dominic Roques

Date: November 29, 2007

Re: Preharvest Inspection of Timber Harvest Plan
1-07-072 SCR SINNOT

PREHARVEST INSPECTION OF TIMBER HARVEST PLAN 1-07-072 SCR SINNOT

Key Information

Inspection Date	June 19, 2007	Persons Present (10)	Affiliation
Plan Size (acres)	78	Jim Hildreth*	Forester
Yarding Type	Tractor (including end / long lining) Skidder Forwarder	David Van Lennep	Forester
		Brian Bishop	Forester
		Scott Bullock	CDF
Watershed	San Lorenzo River	Julia Dyer	Water Board
Sub drainages	Castlerock Falls Kings Creek Boulder Creek	Bethany Crews	Water Board
		Suzanne DeLeon	DFG
		Richard Fitzgerald	DFG
303(d) Listed	None	Donna Bradford	Co. Santa Cruz
Approved TMDL	Sediment 2/19/04	C. Michael Huyette	CGS
Fisheries	Steelhead Coho		
Landowners	Edward and Loretta Sinnot		

*Registered Professional Forester that signed the THP.

History

The 78-acre management area is dominated by second-growth redwood timber that regenerated following clear-cut activities at the turn of the century, and two selective harvest entries in 1970 and 1990. A minimum of 10 year re-entry period shall apply to future harvests.

Location and Management

The 81-acre Sinnot property is located approximately 2 ½ miles northwest of the town of Boulder Creek in north-central Santa Cruz County. The selective harvesting of Redwood and Douglas-fir includes 78 of the 81-acre ownership. Three subwatersheds of the San Lorenzo River are contained within the plan boundaries Castelrock Ridge, Boulder Creek, and Kings Creek. The plan area contains both Class II and Class III watercourses and no Class I watercourses.

Haul Route

The haul route includes Kings Highway to Highway 236, to Highway 9, and finally to Skyline Blvd. The THP proposes hauling approximately four to six logging trucks per day for a period of six to eight weeks.

Rain Gauge Location

Boulder Creek Weather Station www.boulder-creek.com/weather

Inspection

Water Board staff attended the June 19, 2007 inspection as part of the California Department of Forestry and Fire Protection's review team preharvest inspection of the 1-07-072 SCR SINNOT property. The review team's inspection included a representative sample of the roads, skid trails, landings, mitigation sites, and watercourse crossings. Water Board staff also inspected potential monitoring site locations for photo, turbidity, and temperature. Overall, staff found the site to be well maintained, showing little to no signs of erosion or other potential threats to water quality.

Conclusion

Based on review of the THP, the June 19, 2007 inspection, special considerations of this site, and in anticipation of the Discharger following the recommendations outlined in this report, Water Board staff finds the proposed harvest and its associated management practices and mitigations protective of water quality and therefore appropriate for the site.

Follow-up Inspections

Water Board staff found the site to be well maintained and showing little to no signs of erosion or other potential threats to water quality. However, there are two specific

locations that Water Board staff will include in follow-up and/or post-harvest inspections. These sites, compared to the rest of the property, have the greatest potential threat to discharge sediment to waters of the state. These sites are mitigation site M1 and road crossing X1, described in the THP as follows:

Mitigation Site M1

This segment of existing skid trail has a gradient of 10 percent and is contained within a through-cut for approximately 100 feet. Runoff from the roadbed has resulted in a gully about one-foot deep by one-foot wide on the inside of the skid trail. The discharger will treat the gully by back blading and tractor compacting. After operations, and by October 15 or the end of the extended winter period, the discharger will install larger at the top and the bottom of the through-cut. The discharger will then treat this segment with tractor slash pack augmented with grass seed (40 lbs./acre) and straw mulch (at least 2 inches deep) where the amount of slash is insufficient.

Watercourse Crossing X1

The existing seasonal haul road crosses a Class III watercourse utilizing a 24-inch diameter culvert. The road grade and cross slope are both approximately 10 percent. The culvert is partially exposed due to rilling of the road surface by water running down the roadbed and the culvert is partially rusted. Prior to log hauling, the road will be reshaped to provide sufficient fill (minimum 12-inches) over the culvert. After operations, and prior to October 15 or the end of the extended winter period, the discharger will remove the culvert and replace it with a culvert or armored ford (each sized to accommodate estimated 100 year flow).

Recommendations

Water Board staff has no recommendations for the remainder of the plan area at this time.

Roger Briggs, Executive Officer
c/o Julia Dyer
Central Coast Regional Water Quality Control Board
865 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

10/1/07 10:00 AM
San Luis Obispo, CA 93401

Date: 9/5/07

**REQUEST FOR ENROLLMENT UNDER THE GENERAL CONDITIONAL
WAIVER OF WASTE DISCHARGE REQUIREMENTS - TIMBER HARVEST
ACTIVITIES IN THE CENTRAL COAST REGION.**

Dear Mr. Briggs,

As the landowner(s) of the following Timber Harvest Plan (THP) or Nonindustrial Timber Management Plan (NTMP), I would like to request coverage under the General Conditional Waiver of Waste Discharge Requirements - Timber Harvest Activities in the Central Coast Region.

THP/NTMP #:	1-07-072 SCR
Plan Name as written in the THP / NTMP:	Sinnott
Unit name(s) or number(s): (For NTMPs only)	

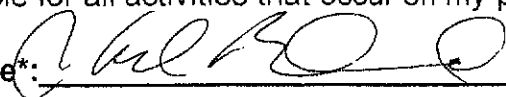
This THP / NTMP was approved by the California Department of Forestry on:

8/2/07
(note: If a water quality based non-concurrence has not been resolved, then the applicant must apply for an individual waiver)

As requested, I have attached the following documents:

- A complete, accurate, and signed Timber Harvest Plan Information Form and Timber Harvest Plan Fact Sheet (Form and Fact Sheet).
- A site map with proposed monitoring points, proposed monitoring route, creeks, landings, skid trails, roads, and mitigation points clearly identified and labeled.
- A site map with slides and EHR areas identified with roads and skid trails.
- Proof of CDF approval of the THP/NTMP (copy of the "green sheet").

I certify that the information contained in the Form and Fact Sheet and on the site map accurately represents site conditions on the property. I also acknowledge that I am ultimately responsible for all activities that occur on my property.

Landowner(s) Signature:  Date: 9/17/07

*Must receive original signature, blue ink preferred.

Timber Harvest Plan Information Form

1. Plan or Notice Name:

Plan Number:

Sinnott	1-07-072 SCR
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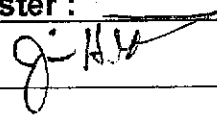
2. Landowner's Contact Information:

Name: Edward B. Sinnott, agent for Loretta Sinnott		
Address: 925 Pine Dr.		
City: Felton	State: CA	Zip Code: 95018
Phone: (831) 335-3514	E-mail address (optional):	

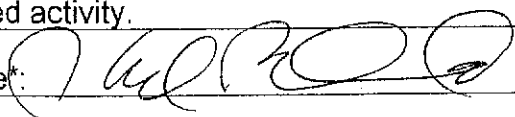
3. Name and Phone Number of Contact Person(s):

Name: Roy Webster	Phone: (831) 462-6237
Name:	Phone: ()

4. Registered Professional Forester :

RPF Name/Signature: Jim Hildreth 	RPF Number: 2639
Address: P.O. Box 1224	
City: Capitola	State: CA Zip Code: 95010
Phone: (831) 464-1196	E-mail address (optional):

5. Certification:

I, the Landowner named above, hereby certify under penalty of perjury that the CDF-approved plan or CDF-accepted notice and the accompanying fact sheet accurately represent site conditions and I understand that, as the Landowner, I am ultimately responsible for all activities that occur on my property. I also understand that I am ultimately responsible for compliance with all conditions of any Waste Discharge Requirements or Waiver of Waste Discharge Requirements issued for the above-referenced activity.	
Signature: 	Date: 9/17/07

*Must receive original signature, blue ink preferred.

Attachments:

- Timber Harvest Plan Fact Sheet
- Site map with all proposed monitoring points, proposed monitoring route, creeks, landings, skid trails, roads, and mitigation points clearly identified and labeled.
- Site map with slides and EHR areas identified with roads and skid trails.
- Proof of CDF approval of the THP/NTMP (copy of the "green sheet").

Timber Harvest Plan Fact Sheet

The following supplemental information will be used in the approval process of the above-referenced Timber Harvest activity.

1. Timber Harvest Plan

Name: Sinnott	Number: 1-07-072 SCR
Location: S ½ of SW ¼ of Section 12, T9S, R3W, MDBM	

2. Responsible Parties

Land Owner: Edward B. Sinnott, agent for Loretta Sinnott		
Address: 925 Pine Dr.		
City: Felton	State: CA	Zip Code: 95018
Phone: (831) 335-3514	E-mail address (optional):	
Timber Owner (if different from Land Owner):		
Address:		
City	State	Zip Code
Phone: ()	E-mail address (optional):	
Forester: Jim Hildreth		
Address: P.O. Box 1224		
City: Capitola	State: CA	Zip Code: 95010
Phone: (831) 464-1196	E-mail address (optional):	

3. Timber Harvest Plan Summary

a) THP size and watershed size

Acreage of THP (parcel size): 78 (81)
Acreage to be harvested (during this conditional waiver enrollment period): 78 (46 Boulder Creek, 22 King's Creek, 10 Castlerock Falls)
Watershed Name (e.g. Pajaro, San Lorenzo, etc.) San Lorenzo
Planning Watershed Name and #: Boulder Creek (3304.120203), Castlerock Falls (3304.120102), King's Creek (3304.120101)

Total acres in planning watershed: 7,347 (Boulder Creek), 7,381 (Castlerock Falls), 7,769 (King's Creek)
Acres harvested in planning watershed in last 15 years: 2,163 (Boulder Creek), 1,143 (Castlerock Falls), 1,493 (King's Creek)
Acres currently proposed for harvest in the planning watershed in addition to this proposed harvest (include any approved NTMPs): 150 (King's Creek)

b) Logging Technique (Yarding) (check all applicable)

Ground based (skidding, long line): <input checked="" type="checkbox"/> X	Cable Yarding: <input type="checkbox"/>	Helicopter: <input type="checkbox"/>
---------------------------------------------------------------------------	-----------------------------------------	--------------------------------------

c) Roads

Number and length of:	Seasonal	All-Weather	Road Watercourse Crossings:			
Existing Roads:	3 / 4,740'	none				
New Roads:	none	none				
Reconstructed Roads (number/length): n/a			Class I:	0	0	0
Roads in unstable areas? No			Class II:	0	0	0
If yes, explain:			Class III:	2	2	0
Roads in WLPZ? (YES/NO) If yes, # of feet and explain: No						
# of feet of roads in:			High EHR: 4,740	Extreme EHR: 0		
# of feet of roads decommissioned: 0						
Any decommissioned in high/extreme EHR?			High EHR: n/a			
No			Extreme EHR: n/a			

d) Skid Trails (If the plan contains areas with unmapped skidtrails, please indicate the acreage of these areas.)

Existing skid trails (number/length): 35/16,120'	Skid Trail Watercourse Crossings:			
New trails (number/length): 1/300'		Tot.	Perm.	Temp.
Reconstructed Roads (number/length): 0	Class I:	0	0	0
Skid Trails in WLPZ (YES/NO)?	Class II:	2	0	2
If yes, explain: Yes, 200' at Ld. A/100' at Ld. B Waterbreaks shall be installed at a maximum 50' spacing. All skid trails within WLPZ's shall be tractor slash packed augmented with grass seed (40 lbs./acre) and straw mulch (minimum straw depth 2") where the amount of slash is insufficient. The minimum coverage shall be at least 90% 14 CCR 916.9(n)(3). All waterbreaks and their outlets shall be stabilized with slash or seed and straw mulch.	Class III:	1	0	1
Trails in unstable areas (YES/NO)? If yes, explain: No				
# of feet of skids in High EHR: 16,120 Extreme EHR: 0				
# of feet of skids decommissioned: 0				

Any tractor operations in areas with high/extreme EHR with no flagged or marked skid? (YES/NO) No	High EHR: n/a Extreme EHR: n/a
------------------------------------------------------------------------------------------------------	-----------------------------------

e) Landings

of landings decommissioned: 0
Existing landings (number): 7
New Landings (number): 0
Reconstructed Landings (number): 0
Landings in unstable areas? (YES/NO) If yes, explain: No
Landings in WLPZ? (YES/NO) If yes, explain: Yes, part of Ld. A. The portion of the landing within the WLPZ shall be stabilized by tractor slash packing or grass seed (40 lbs./acre) and straw mulch (at least 2 inches deep). The minimum coverage shall be at least 90% 14 CCR 916.9(n)(3).

f) Stream Classes

# of each type of stream:	Linear feet of stream:
I: 0	I: 0
II: 4	II: 1,830
III: 4	III: 1,580

g) Winter operations (YES/NO)?

Yes; Entire THP area:
Timber falling is proposed throughout the winter period (and is allowed year-round). No heavy equipment operations under this winter operations plan are allowed except for the conditional periods between October 15 and November 30, and April 15 through April 30. Heavy equipment operations during the winter period shall be halted after November 30, or when cumulative seasonal rainfall exceeds 4 inches as reported at the Boulder Creek Weather Station (<http://www.boulder-creek.com/weather/>), whichever comes first. Seasonal rainfall for this THP begins October 1.

Heavy equipment operations (tractor skidding, loading, hauling, and roadwork) conducted after October 15 and prior to May 1 shall be limited to the period of low antecedent soil moisture. During the winter period, skidding is limited to existing trails; 2 landings and associated trails and road to be open at any time. Between October 15 and November 30, the LTO shall have an adequate supply of straw bales, straw blankets, or slash positioned near all crossings and other areas of exposed soil within an ELZ or WLPZ to facilitate the rapid application prior to rainfall. Erosion control facilities shall be installed on all skid trails, roads, and landings prior to the end of the day if the U.S. Weather Service forecast is a "chance" of rain 30% or more rain before the next day, and prior to the weekend or other shutdown periods. Waterbreaks shall be installed on all trails and roads prior to overland flow within a WLPZ or ELZ.

h) Erosion Hazard (check all applicable)

Medium:	High: X	Extreme:
---------	---------	----------

i) Percent Canopy Retained in the Watershed & Lake Protection Zone (WLPZ)

Class I: n/a
Class II: 50%
Class III: no requirement (likely ~50% of existing conifer)
No-Cut Zone(s)? (YES/NO) No

**j) Mitigation points (summarize or import from timber harvest plan) –
Reference site map**

Water Crossings: See Attachment
Roads: See Attachment
Skid Trails: See Attachment
Landings: See Attachment

k) In Lieu Practices (YES/NO)? Yes

If yes please explain reason(s) in lieu practices are utilized:

The existing roads, landings, and skid trails were built 35+ years ago and the nearby watercourse was not considered to require the same degree of protection. Rather than build new roads, landings, and trails adjacent to the existing functional infrastructure, we propose to use existing structures which are now in WLPZs and treat exposed surfaces appropriately to avoid, minimize or mitigate increased or concentrated runoff and associated potential increased sediment movement.

An in-lieu practice to Rule 916.3(c) is proposed to use existing skid trails within the WLPZ of Class II watercourses (See "W" on THP map).

There are skid trail segments located within Class II WLPZs. These are existing trails within the WLPZ and were used for previous harvests and are generally stable. Mitigation shall be installed following operations and prior to the start of any rain that causes overland flow across or along the disturbed surface, and as further required in Section II, Item #21 (Winter Operations). Waterbreaks shall be installed at a maximum 50' spacing. All skid trails within WLPZ's shall be tractor slash packed augmented with grass seed (40 lbs./acre) and straw mulch (minimum straw depth 2") where the amount of slash is insufficient. The minimum coverage shall be at least 90% 14 CCR 916.9(n)(3). All waterbreaks and their outlets shall be stabilized with slash or seed and straw mulch.

The skid trails within the WLPZ's are in good condition and generally appear stable. The trails were used for previous harvests – no new WLPZ trails are proposed. The use of the standard rule would allow for the construction of new trails outside of the WLPZ's. This would require new construction on undisturbed ground taking more land out of production and creating more disturbance. New construction where it is not necessary would likely have a greater impact to the overall resource values on the property. With the proposed mitigation measures, the use of the in lieu practice will provide equal or greater protection than the standard rule.

An in-lieu practice to Rule 916.3(c) is proposed to use one existing landing within a portion of a Class II WLPZ.

Landing A is located on the outer edge of a Class II WLPZ. A small portion of this landing is within the WLPZ. The landing has been used for previous harvests. Mitigation shall be installed following operations and prior to the start of any rain that causes overland flow across or along the disturbed surface, and as further required in Section II, Item #21 (Winter Operations). The portion of the landing within the WLPZ shall be stabilized by tractor slash packing or grass seed (40 lbs./acre) and straw mulch (at least 2 inches deep). The minimum coverage shall be at least 90% 14 CCR 916.9(n)(3).

A portion of Landing A is within a Class II WLPZ and is in good condition. The landing was used for previous harvests. The landing shall be tractor slash packed or treated with grass seed and straw mulch after use. The use of the standard rule would allow for the construction of a new landing outside of the WLPZ. This would require new construction on undisturbed ground taking more land out of production and creating more disturbance. New construction where it is not necessary would likely have a greater impact to the overall resource values on the property. With the proposed mitigation measures, the use of the in lieu practice will provide equal or greater protection than the standard rule.

l) Water Drafting (YES/NO)? No

Drafting location(s):

Drafting flow rate (gallons/minute):

Other drafting in watershed (number/total flow rate estimate):

m) Cumulative Impact Analysis

Threatened and Impaired for Steelhead/Coho? (YES/NO) Yes

303(d) Listed Waterbody (YES/NO)? Yes

If yes, what is the impairment (sediment, temperature, etc.)?: Boulder Creek listed for sedimentation/siltation; San Lorenzo listed for pathogens.

Sources of Cumulative Impacts (briefly describe): Primarily residential impacts from public and private roads, driveways, domestic water procurement; also livestock, vineyards, and specialty agriculture.

n) Proposed Monitoring Points and Data

Describe all monitoring points shown on site map:

As indicated by Water Quality staff during the pre-harvest inspection, monitoring shall consist of the following photo points only.

Photos:

M1: The skid trail above Landing A (M1)

X1: The new culvert or ford at crossing X1.

Temperature: No temperature monitoring is feasible for this plan due to a lack of water in the Class II watercourses during most of the year

Turbidity: There are no Class I or II road crossings. Turbidity monitoring would likely be difficult because of the same lack of water.

Please provide any water temperature data acquired from the THP/NTMP or surrounding areas with your application. None available

o) Rainfall measurement procedures and locations

Heavy equipment operations during the winter period (including tractor skidding, loading, hauling and roadwork) shall be halted after November 30, or when cumulative seasonal rainfall exceeds 4 inches as reported at the Boulder Creek Weather Station (<http://www.boulder-creek.com/weather/>), whichever comes first. Seasonal rainfall for this THP begins October 1.

p) Central Coast Regional Water Quality Control Board Staff Site Inspection

Describe the most recent inspection of the property by Water Board staff:

Name of Staff Person	Date of Inspection	Purpose of Inspection	Portion of property inspected.
Julia Dyer	6/19/07	PHI	Entire

q) Names and addresses of any property owner within 300 feet of the timber harvest area or harvest area entrance road (from public right of way).

085-092-11
Michael D. Souza
910 King's Highway
Boulder Creek, CA 95006

085-121-14
Richard Kyle Petersen
PO Box 66506
Scotts Valley, CA 95067

086-192-08
Robin Hood's Retreat Improver
505 Locksley Rd.
Boulder Creek, CA 95006

085-121-12
Albert Jacob Ellens
9466 Park St.
Bellflower, CA 90706

085-121-13
Kenneth & Muriel Marks
PO Box 67435
Scotts Valley, CA 95067

085-111-22
Lisa Cooke
279 Verde Mesa
Danville, CA 94526

085-111-74
Velma F. Greyell
7300 Viewpoint Rd.
Aptos, CA 95003

085-111-73
Richard S. Rose
PO Box 1366
Boulder Creek, CA 95006

085-111-14
Alfred H. & Marianne Robin
c/o Marianne Mattos
13437 Sycamore Ave.
Morgan Hill, CA 95037

082-111-48
Gordon Edelheit
222 8th St.
San Francisco, CA 94103

085-111-60, 085-111-61
James T. Kinsella
68-004 Laau Paina Pl.
Waialua, HI 96791

085-111-82, 085-111-12
Marianne Hunter-Chance
175 Cheney Wy.
Boulder Creek, CA 95006

085-111-76
Eileen M. O'connell
228 Oakwood Dr.
Boulder Creek CA 95006

086-171-25
Michael R. Roske
1725 Robinhood Ln.
Boulder Creek, CA 95006

086-183-18
Skye Barcus
PO Box 871
Ben Lomond, CA 95005

085-101-19
Young Men's Christian Assoc. of SCV
1922 The Alameda Fl. 3
San Jose, CA 95126

083-011-01
Joseph Robert Beasley
1500 Robin Hood Ln.
Boulder Creek, CA 95006

085-113-03
Robert C. & Loretta D. Malat TR
PO Box 69
Boulder Creek, CA 95006

086-171-26
Gurden Mooser
c/o Zoccoli
134 Bradley Dr.
Santa Cruz, CA 95060

086-183-19
John S. & Charlene J. McCormick
810 King's Highway
Boulder Creek, CA 95006

083-011-08
Roger A. & Michelle Burch, TR
2 W. Santa Clara St. 9th Floor
San Jose, CA 95113

086-192-16
Jennifer S. & David F. Needham
626 Nottingham Wy.
Boulder Creek, CA 95006

086-171-62
Grant D. Lind, jr.
2749 Briarfield Ave.
Redwood City, CA 94061

086-171-63, 086-183-20
Michael F. & Renee R. Cole
PO Box 1765
Boulder Creek, CA 95006

086-192-07, 086-192-11
Gene M. & Jennifer A. Lind
568 King's Highway
Boulder Creek, CA 95006

083-011-03
Darrel & Deanna Hulgán
19219 Sunny Cir.
Sonora, CA 95370

ATTACHMENT

j) Mitigation Points

WATER CROSSINGS:

Road Crossings:

X1 – The existing seasonal haul road crosses a Class III watercourse utilizing a 24 inch diameter culvert. The road grade and cross slope are both approximately 10%. The culvert is partially exposed due to rilling of the road surface by water running down the roadbed and the culvert is partially rusted. Prior to log hauling, the road will be reshaped to provide sufficient fill (minimum 12 inches) over the culvert. After operations, and prior to October 15 or the end of the extended winter period, the culvert shall be removed and replaced with a culvert or armored ford (each sized to accommodate estimated 100 year flow).

The derived size for a 100 year flood event culvert is 32 inches (See page 91.1, Section V, Watercourse crossing volume calculation). If an armored ford is installed, it shall be minimum sized to carry the same capacity as a 32 inch culvert (804 sq. in.). The ford shall be at least 7.5 feet in width by 18 inches deep (810 sq. in.). Geotextile fabric shall be placed throughout the dip and on the fillslope. The dip shall be armored with rock at least 3-5 inches in size. The outlet of the dip shall be armored with large rocks or concrete chunks at least 12 inch in size for at least two feet. The rest of the ELZ shall be grass seeded (40 lbs/acre) and covered with at least 2 inches of straw mulch.

X2 – The existing seasonal haul road crosses a Class III watercourse utilizing a 12 inch diameter culvert. The road grade is 18% above the crossing and 14% below. The channel slope is 12% above and 25% below the crossing. The culvert shall be retained. After operations, and prior to October 15 or the end of the extended winter period, a critical dip will be installed. The inlet and trash rack shall be cleaned of debris.

Skid Trail Crossings:

SX1 – This is an existing dip skid trail crossing of a Class II watercourse above landing A. The skid trail gradient is 35-40% to the north and less than 10% to the south. The gradient of the Class III watercourse at this point is about 12%. This crossing is expected to be dry at the time of operations. In the unlikely event that there is water running at the time of operations, a temporary pipe sufficient to handle unrestricted flow (at least 4" by 20") will be installed and then removed. After operations are complete, a large dip shall be installed. The entire ELZ (minimum 25 feet where sideslope steepness is less than 30% and at least 50 feet where sideslope steepness is 30% or greater) shall be tractor slash packed or grass seeded (40 lbs/acre) and covered with at least 2 inches of straw mulch. This mitigation shall be installed after the completion of operations and prior to October 15 or the end of the extended winter period.

SX2 – This is an existing dip skid trail crossing of a Class II watercourse north of Landing B. The skid trail gradient into the crossing from the southwest is approximately 25%; the opposite side of the crossing is approximately 10%. This crossing is expected to be dry at the time of operations. In the unlikely event that there is water running at the time of operations, a temporary pipe sufficient to handle unrestricted flow (at least 4" by 20") will be installed and then removed. After operations are complete, a large dip shall be installed. The entire ELZ (minimum 25 feet where sideslope steepness is less than 30% and at least 50 feet where sideslope steepness is 30% or greater) shall be tractor slash packed or grass seeded (40 lbs/acre) and covered with at least 2

inches of straw mulch. This mitigation shall be installed after the completion of operations and prior to October 15 or the end of the extended winter period.

SX3 – Removed from plan.

SX4 – This is an existing dip skid trail crossing of a Class III watercourse south of Landing B. The skid trail gradient is approximately 20% to the south; the opposite side of the crossing is essentially landing B and is flat. Stream gradient is approximately 15% above and 5% below the crossing. The channel makes an approximately 110 degree bend at the crossing. This crossing is expected to be dry at the time of operations. In the unlikely event that there is water running at the time of operations, a temporary pipe sufficient to handle unrestricted flow (at least 4" by 20') will be installed and then removed. After operations are complete, a large dip shall be installed. The entire ELZ (minimum 25 feet where sideslope steepness is less than 30% and at least 50 feet where sideslope steepness is 30% or greater) shall be tractor slash packed or grass seeded (40 lbs/acre) and covered with at least 2 inches of straw mulch. In addition, the existing berm on the north side of the crossing shall be re-established to prevent water from diverting onto Landing B. This mitigation shall be installed after the completion of operations and prior to October 15 or the end of the extended winter period.

ROADS:

M3 – An approximately 800 foot section of existing seasonal road has a berm on the outside edge. This is blocking runoff from exiting the roadbed. After operations, this road segment shall be outsloped where feasible and the berm removed. Waterbreaks shall be installed as required for high EHR. The outfall of the waterbars shall be treated with slash or straw mulch (minimum 2 inch depth).

M8 – This segment of existing seasonal road has a grade of about 15% and is contained within a slight through-cut for approximately 75 feet. Following operations and prior to October 15th or the end of the extended winter period, this segment of roadbed shall be outsloped as much as feasible. A large waterbreak shall be installed at the head of the through-cut.

SKID TRAILS:

M1 – This segment of existing skid trail has a gradient of 10% and is contained within a through-cut for approximately 100 feet. Runoff from the roadbed has resulted in a gully about one foot deep by one foot wide on the inside of the skid trail. The gully shall be filled by back blading and tractor compacting. After operations, and by October 15 or the end of the extended winter period, large waterbreaks shall be installed at the top and the bottom of the through-cut. This segment shall be tractor slash packed augmented with grass seed (40 lbs./acre) and straw mulch (at least 2 inches deep) where the amount of slash is insufficient.

M2 – There are several locations where motorcycles are gaining access to the property over skid trails. Mitigation to reduce this trespass is proposed in several locations (all identified as M2 on THP map). In these locations, skid trails shall be treated with large slash to discourage trespass.

M4 – An approximately 80 foot segment of existing skid trail is located in a dry swale on 30% slopes. After operations, this segment shall be tractor slash packed augmented with grass seed (40

lbs./acre) and straw mulch (at least 2 inches deep) where the amount of slash is insufficient. This shall be completed following operations and by October 15 or the end of the extended winter period.

M5 – An existing skid trail crosses a dry swale on slopes of about 45%. The trail gradient is approximately 25%. After operations, the segment within the swale shall be tractor slash packed augmented with grass seed (40 lbs./acre) and straw mulch (at least 2 inches deep) where the amount of slash is insufficient. The existing berm on the west side of the swale will be reinstalled. This shall be completed following operations and by October 15 or the end of the extended winter period.

M6 – An existing skid trail is located adjacent to a Class III ELZ. After operations, the entire skid trail shall have waterbreaks installed at the spacing required for High erosion hazard rating. The portion of trail adjacent to the ELZ shall be tractor slash packed augmented with grass seed (40 lbs./acre) and straw mulch (at least 2 inches deep) where the amount of slash is insufficient. This stabilization shall be completed as soon as practical following operations and prior to October 15th or the end of the extended winter period.

M7 – Removed from plan.

M9 – This new segment of skid trail is approximately 300 feet in length and is located on slopes of 40-50%. It is needed to connect an existing skid trail to the seasonal road without crossing onto the neighboring property. After operations, and prior to October 15 or the end of the extended winter periods, waterbreaks shall be installed at a maximum 50 foot spacing. The new skid trail segment shall be tractor slash packed augmented with grass seed (40 lbs./acre) and straw mulch (at least 2 inches deep) where the amount of slash is insufficient.

LANDINGS:

All landings where timber operations occur under this plan shall be stabilized by seeding with grass (40 lbs./acre) and covered with at least two inches of straw mulch over the entire exposed surface. Alternatively, the landings may be rocked (minimum two inch depth) or tractor slash packed. These landings shall be treated at the end of operations, and prior to October 15 or the end of the extended winter period.

Landing A – This landing is adjacent to the timber harvest boundary. The LTO shall insure that all timber operations are within the timber harvest boundary. There is a home site approximately 125 feet from the timber harvest boundary and the edge of the landing. Slash between the harvest boundary and 200 feet of the home site shall be lopped to within 12 inches of the ground, or removed to a location farther than 200 feet away from the home site. *Please see Section II, Item 30, Hazard Reduction.*

Landing B – One edge of the landing is adjacent to the WLPZ of a Class II watercourse. Although skidding is allowed within this WLPZ, no landing activity (decking logs, loading logs, etc.) shall occur within the WLPZ. The edge of the landing at the Class II WLPZ shall be identified with logs, temporary fencing, stakes or equivalent. After the completion of operations, and prior to October 15 or the end of the extended winter period, a large waterbreak shall be placed on the road below the landing. This waterbreak shall divert runoff from the landing into the trees/brush and prevent runoff from flowing down the road.

Sinnott THP
1-07-072 SCR

Landing E – A skid trail leaves the landing and heads uphill. In order to minimize the potential for runoff from the skid trail to enter the landing, the skid trail shall be tractor slash packed from the intersection with the landing to the first waterbreak on the skid trail for a distance of at least 25 feet.

Water Quality Monitoring Map

Sinnott

Portions of

T9S, R3W, Section 12, MDB&M

Santa Cruz County, CA

Big Basin 7.5' Quadrangle

Scale 1" = 500' CI = 40'

Monitoring Route

Property Boundary

Harvest Boundary

Seasonal Road(Existing)

Road Mitigation Point M3, M8

Landing

Skid Trail

New Skid Trail

Skid Trail Mitigation Point M1,M2,M4,M5,M6,M9

Home site

Road Watercourse Crossing X1, X2

Skid Trail Watercourse Crossing SX1, SX2, SX4

Watercourse Transition

Class II Watercourse

Class III Watercourse

ELZ Skid Trail

Skid Trail on Steep Slopes

ENTIRE AREA HIGH EHR

Cam

Robin Hood Ln.

Photos:

Photo Point 1: X1

Photo Point 2: M1

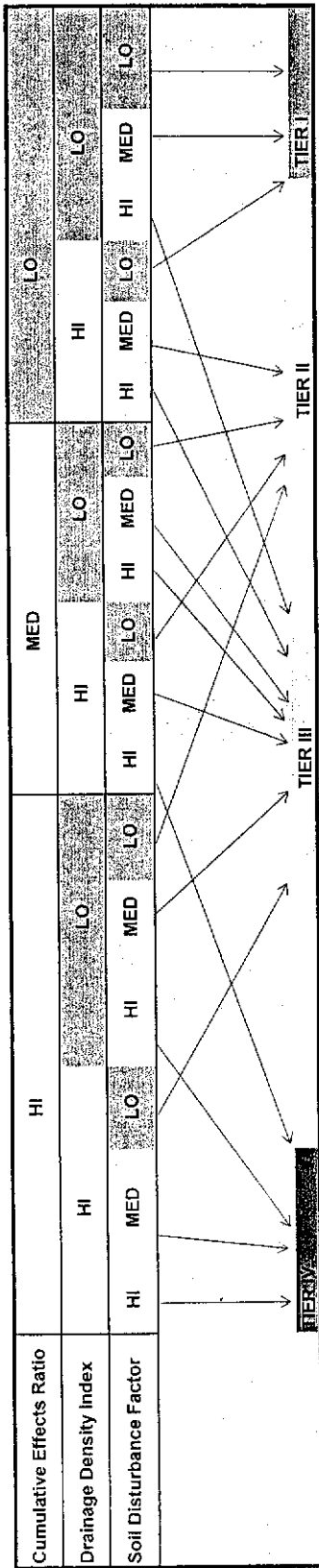
Country Club

Haul Route to Kings Hwy

Eligibility Criteria

Plan No.:	1-07-072 SCR
Plan Name:	SINNOTT

Regulatory and Monitoring Requirement Decision Tool



Regulatory Option

Individual WDR or Waiver

Monitoring Requirements

Individual Monitoring

General Conditional Waiver for Timber Operations

Tier III Monitoring Requirements include water column monitoring for temperature and turbidity, visual and photo monitoring of timber harvest area infrastructure, CDF Forest Practice Rules compliance monitoring, road inventory program, and forensic monitoring as necessary. Tier III monitoring is automatically required if ground based equipment is used off of an all-weather road during the period October 15 - May 1.

Tier II Monitoring Requirements include visual and photo monitoring of timber harvest area infrastructure, CDF Forest Practice Rules compliance monitoring, road inventory program, and forensic monitoring as necessary.

Tier I Monitoring Requirements include CDF Forest Practice Rules compliance monitoring, road inventory program, and forensic monitoring as necessary.

	High	Med	Low	Final
Cumulative Effects Ratio	>15%	15% to 10%	<10%	High
Drainage Density Index	>100		<100	Low
Soil Disturbance Factor	>2500	2500 to 1000	<1000	Medium

Winter Ops Proposed - Automatic Tier III

22%
65
1108

Plan No.:	1-07-072 SCR
Plan Name:	SINNOTT

Cumulative Effects Ratio

Acres Proposed for Harvest or Harvested in Planning Watershed (CalWater) in last fifteen years*					
Is the proposed harvest in a 303(d) listed watershed?**	Acres to be harvested as part of proposed THP/NTMP	Sum	Total Acres in Planning Watershed	CER	
Yes	78	4877	22497	22%	

* Include all acreage in proposed and approved THPs/NTMPs

* *Watershed 303d listed as impaired from sediment or temperature?

If yes type "yes" or leave blank.

Plan No.:	1-07-072 SCR
Plan Name:	SINNOTT

Drainage Density Index

ft. of Class I	ft. of Class II	ft. of Class III	Corrected Sum	Plan Area (ac)	DDI
0	1830	1580	5240	81	65

Exhibit 2

Monitoring Locations

Water Quality Monitoring Map

Sinnott

Portions of

T9S, R3W, Section 12, MDB&M

Santa Cruz County, CA

Big Basin 7.5' Quadrangle

Scale 1" = 500' CI = 40'

Monitoring Route

Property Boundary

Harvest Boundary

Seasonal Road(Existing)

Road Mitigation Point M3, M8

Landing

Skid Trail

New Skid Trail

Skid Trail Mitigation Point M1,M2,M4,M5,M6,M9

Home site

Road Watercourse Crossing

Skid Trail Watercourse Crossing SX1, SX2, SX4

Watercourse Transition

Class II Watercourse

Class III Watercourse

ELZ Skid Trail

Skid Trail on Steep Slopes

X1, X2

SX1, SX2, SX4

~

E

+

ENTIRE AREA HIGH EHR

Cam

Robin Hood Ln.

Photos:

Photo Point 1: X1

Photo Point 2: M1

Country Club

Haul Route to Kings Hwy

29 (revised 8-15-07)

Exhibit 3

Big Creek Road Inventory Program

Standard Operating Procedure 5.2.3
Photo Documentation Procedure

Standard Operating Procedures
Instream Turbidity Monitoring

BIG CREEK ROAD INVENTORY PROGRAM (BCRIP)
PROTOCOL FOR CONDUCTING COMPANY ROAD
INVENTORIES & MAINTENANCE

Purpose

Big Creek Lumber Company owns and controls over 11,000 acres of forestlands on which there are over 60 miles of permanent, temporary, surfaced, and un-surfaced roads. Maintenance of these roads requires frequent monitoring and treatment.

This document has been drafted to provide the standard operating procedures for conducting and recording road inventories and for the use of the inventory to direct appropriate treatments. This protocol has been drafted so as to guide road inventories consistent with Big Creek goals & objectives and with the certification of Big Creek's lands with the Forest Stewardship Council (FSC).

Process of Road Inventory

Big Creek conducts road inventories on varying intervals, depending upon (1) the designated use of the road, (2) the intensity and duration of precipitation received, (3) the hydrologic activity of the stream system in the area, (4) the susceptibility of the road and appurtenant crossings to failure or damage, and (5) the interval of time since that portion of road was used.

On properties where there has been recent activity or road use, especially if road drainage was altered or improved, review of the roads is conducted more frequently. For each portion of road, Big Creek has designated a standard interval of 2 inches of rain per storm event as the cue to send out maintenance crews. The 2" standard interval is subject to change based on the relationship between the five factors listed above.

When indicated by the interval period, or when deemed necessary otherwise, an individual or group of persons will review the portion of road. Road inventory may be conducted on foot, by pickup, or (especially in wet periods) by ATV or other light-tracking vehicle. While conducting the inventory, the person or persons will do handwork, where necessary, to clear and improve drainage structures and culverts.

Each instance a portion of road is inventoried, a form is filled out recording the observations of the person (see Appendix B, Road Inventory Form). This form allows the person to record the location, date, problem, and proposed solution. This form is then submitted to the Chief Forester of Operations (CFO).

After the road inventory form is completed, it is entered into the roads inventory database (a spreadsheet which tracks observations, work completed, and dates of last review for a portion of road).

If the need for repair or maintenance is immediate, the road reviewer will immediately notify the Chief Forester of Operations so that an appropriate treatment may be planned and initiated. All road inventory forms submitted to the CFO are reviewed, and potentially urgent problems are further analyzed to determine if immediate treatment is necessary. When immediate treatment is prescribed, the project is listed with indication of urgency on a dry erase board posted in the Big Creek Forestry Office. As soon as resources are available to conduct the treatment operations, the necessary equipment, materials, and personnel are dispatched to the site.

After the site is treated, the CFO or the CFO's designee will review the site to determine the success of the treatment. This site, at an interval dependent upon the treatment, will be reviewed over time to evaluate success of treatment and to determine if follow-up treatment is necessary.

For sites that do not require immediate treatment, the records for that site will not be further reviewed until the biennial summary of roads is prepared (May 1 and November 1 of every year). At these times corresponding to the approximate end and beginning, respectively, of the winter period, the latest records for each property are reviewed and responsibility for appropriate treatments are delegated. Subsequent evaluation of the treatment's success is conducted, and follow-up treatment prescribed, if necessary.

ELEMENTS OF THE FIVE FACTORS THAT DETERMINE INSPECTION TRIGGERS FOR THE BCRIP:

Watershed:

- Threatened and Impaired
- 303 (D) Listed Stream Segments
- Sub-division/home proximity to project area
- Orographic effect:
 - South county vs. North county
- Project elevation, low vs. high in the watershed
- Road conditions outside of project area that contribute or receive flow
- Watercourse classifications for project area

Porosity:

- Fast vs. slow
- Soil type - sandstone/shale/granite
- High vs. low rock content
- Ground saturation point/springs begin to flow at higher rates

Topography:

- Steep/flat/undulating
- Indication of instabilities/ tipped trees/earth fractures/slides
- Proximity to San Andreas Fault

Vegetative Cover Type:

- Brush/oak woodland/conifer
- General vegetative cover

General Elements Associated with Infrastructure:

Age of road:

- Older vs. newer road/existing leaf cover/general vegetation cover

History:

- Legacy problems/old humboldt crossings
- Who designed and implemented the existing road/crossings
- Past performance and condition of general infrastructure

Location of road:

- Ridge top/steep ground/proximity to watercourse/roads on unstable areas

Road surfacing:

- Rocked/ based/seeded/straw mulched/slash packed/un-surfaced

Road Standard:

- Insloped/outsloped/crowned/re-contoured:
- Spittler outslope of new roads
- Full bench road cut/balanced cut and fill/fill
- Through cuts/long run of through cut
- Berms on outside edge of road
- Seasonal/all winter road

Type of drainage and crossings:

- Waterbars/rolling dips/bridges/culverts/rocked fords
- Current condition of erosion control structures/How much do you think they can handle

Trespass

- 4WD/motorcycles/mountain bikes/horses/foot traffic

Watercourse crossing location and frequency

Gopher holes

Pig wallows/rooting

PG&E access road

EHR rating in THP

Weather:

- Interval of time since the last rain event
- Type of rain year/El nino/are storms holding more rain
- Jet stream status
 - High pressure or low pressure
- Wind direction:
 - South East - Strong high pressure
 - South - Storm medium pressure
 - Southwest - Storm low pressure
 - East/Southeast - Strong extreme low pressure
 - West - Clearing
- Check the barometer
- Soaking, low intensity, rain vs. hard, high intensity, rain
- General weather patterns

Trigger Assessment Tools:

- Weather radio
- Barometer
- Local contacts:
 - Forest landowners
- Local news forecasts
- Tell tail locations:
 - Creek mouths open to the ocean
 - General overland flow
 - Bridge crossings of major rivers/streams/creeks throughout the county
 - Etc...
- State wide contacts
 - Other foresters and forestry companies

California Newts:

- Moving uphill vs. downhill

Weather web sites (rainfall, stream flow, satellite imagery, forecasts, flood warnings, etc...):

<http://www.wrh.noaa.gov/mtr/>

<http://www.goes.noaa.gov/>

http://water.usgs.gov/cgi-bin/waterwatch?map_type=real&state=ca

<http://cdec.water.ca.gov/misc/realStations.html>

http://www.weather.com/maps/maptype/satelliteworld/pacificoceansatellite_large_animated.html?

<http://www.wrh.noaa.gov/mtr/gettext.php?pil=RR5&sid=RSA>

<http://www.surflife.com/home/index.cfm>

<http://weather.cnn.com/weather/forecast.jsp?locCode=SRU>

OWNERSHIP:

DATE:

NAME(S):

LOCATION:

PROBLEM:

CODES

SOLUTION:

CODES

LOCATION:

PROBLEM:

CODES

SOLUTION:

CODES

PROBLEM

Cut-Bank Failure	1
Fill-Slope Failure	2
Water Bar Failure	3
Fill Failure	4
Drainage Problem	5
Cracks/Settling	6
Plugged Culvert	7
Wash-Out	8
Slide Debris/Flow	9
Trees Blocking Road	10

SOLUTION

Replace	A
Reconstruct	B
Drain	C
Resurface	D
Remove	E
Cover	F
Mechanical	M
Hand Work	H
Temporary	T
Permanent	P

Standard Operating Procedure 5.2.3

Photo Documentation Procedure

Introduction:

Photographs provide a qualitative, and potentially semi-quantitative, record of conditions in a watershed or on a water body. Photographs can be used to document general conditions on a reach of a stream during a stream walk, pollution events or other impacts, assess resource conditions over time, or can be used to document temporal progress for restoration efforts or other projects designed to benefit water quality. Photographic technology is available to anyone and it does not require a large degree of training or expensive equipment. Photos can be used in reports, presentations, or uploaded onto a computer website or GIS program. This approach is useful in providing a visual portrait of water resources to those who may never have the opportunity to actually visit a monitoring site.

Equipment:

Use the same camera to the extent possible for each photo throughout the duration of the project. Either 35 mm color or digital color cameras are recommended, accompanied by a telephoto lens. If you must change cameras during the program, replace the original camera with a similar one comparable in terms of media (digital vs. 35 mm) and other characteristics. A complete equipment list is suggested as follows:

Required:

- Camera and backup camera
- Folder with copies of previous photos (do not carry original photos in the field)
- Topographic and/or road map
- Aerial photos if available
- Compass
- Timepiece
- Extra film or digital disk capacity (whichever is applicable)
- Extra batteries for camera (if applicable)
- Photo-log data sheets or, alternatively, a bound notebook dedicated to the project.
- Yellow photo sign form and black marker, or, alternatively, a small black board and chalk

Optional:

- GPS unit
- Stadia rod (for scale on landscape shots)
- Ruler (for scale on close up views of streams and vegetation)

Some safety concerns that may be encountered during the survey include, but are not limited to:

- Inclement weather
- Flood conditions, fast flowing water, or very cold water
- Poisonous plants (e.g.: poison oak)
- Dangerous insects and animals (e.g.: bees, rattlesnakes, range animals such as cattle, etc.)
- Harmful or hazardous trash (e.g.: broken glass, hypodermic needles, human feces)

We recommend that the volunteer coordinator or leader discuss the potential hazards with all volunteers prior to any fieldwork.

General Instructions:

From the inception of any photo documentation project until it is completed, always take each photo from the same position (photo point), and at the same bearing and vertical angle at that photo point. Photo point positions should be thoroughly documented, including photographs taken of the photo point. Refer to copies of previous photos when arriving at the photo point. Try to maintain a level (horizontal) camera view unless the terrain is sloped. (If the photo can not be horizontal due to the slope, then record the angle for that photo.) When photo points are first being selected, consider the type of project (meadow or stream restoration, vegetation management for fire control, ambient or event monitoring as part of a stream walk, etc.) and refer to the guidance listed on *Suggestions for Photo Points by Type of Project*.

When taking photographs, try to include landscape features that are unlikely to change over several years (buildings, other structures, and landscape features such as peaks, rock outcrops, large trees, etc.) so that repeat photos will be easy to position. Lighting is, of course, a key ingredient so give consideration to the angle of light, cloud cover, background, shadows, and contrasts. Close view photographs taken from the north (i.e., facing south) will minimize shadows. Medium and long view photos are best shot with the sun at the photographer's back. Some artistic expression is encouraged as some photos may be used on websites and in slide shows (early morning and late evening shots may be useful for this purpose). Seasonal changes can be used to advantage as foliage, stream flow, cloud cover, and site access fluctuate. It is often important to include a ruler, stadia rod, person, farm animal, or automobile in photos to convey the scale of the image. Of particular concern is the angle from which the photo is taken. Oftentimes an overhead or elevated shot from a bridge, cliff, peak, tree, etc. will be instrumental in conveying the full dimensions of the project. Of most importance overall, however, is being aware of the goal(s) of the project and capturing images that clearly demonstrate progress towards achieving those goal(s). Again, reference to *Suggestions for Photo Points by Type of Project* may be helpful.

If possible, try to include a black board or yellow photo sign in the view, marked at a minimum with the location, subject, time and date of the photograph. A blank photo sign form is included in this document.

marker post) then have an alternate method (map, aerial photo, copy of an original photograph of the photo-point, etc).

2. Select an existing structure or landmark (mailbox, telephone pole, benchmark, large rock, etc.), identify its latitude and longitude, and choose (and record for future use) the permanent position of the photographer relative to that landmark. Alternatively, choose the procedure described in *Monitoring California's Annual Rangeland Vegetation* (UC/DANR Leaflet 21486, Dec. 1990). This procedure involves placing a permanently marked steel fence post to establish the position of the photographer.
3. For restoration, fuel reduction, and BMP projects, photograph the photo-points and carry copies of those photographs on subsequent field visits.

Determining the Compass Bearing:

1. Select and record the permanent magnetic bearing of the photo center view. You can also record the true compass bearing (corrected for declination) but do not substitute this for the magnetic bearing. Include a prominent landmark in a set position within the view. If possible, have an assistant stand at a fixed distance from both the photographer and the center of the view, holding a stadia rod if available, within the view of the camera; preferably position the stadia rod on one established, consistent side of the view for each photo (right or left side).
2. Alternatively, use the procedure described in *Monitoring California's Annual Rangeland Vegetation* (UC/DANR Leaflet 21486, Dec. 1990). This procedure involves placing a permanently marked steel fence post to establish the position of the focal point (photo center).
3. When performing ambient or event photo monitoring, and when a compass is not available, then refer to a map and record the approximate bearing as north, south, east or west.

Suggestions for Photo Points by Type of Project:

Ambient or Event Monitoring, Including Photography Associated with Narrative Visual Assessments:

1. When first beginning an ambient monitoring program take representative long and/or medium view photos of stream reaches and segments of shoreline being monitored. Show the positions of these photos on a map, preferably on the stream/shore walk form. Subjects to be photographed include a representative view of the stream or shore condition at the beginning and ending positions of the segment being monitored, storm drain outfalls, confluence of tributaries, structures (e.g., bridges, dams, pipelines, etc.).
2. If possible, take a close view photograph of the substrate (streambed), algae, or submerged aquatic vegetation.

4. Long view and medium view of streambed changes (thalweg, gravel, meanders, etc.)
5. Medium and close views of structures, plantings, etc. intended to induce these changes.
6. Optional: Use a tape set perpendicular across the stream channel at fixed points and include this tape in your photos described in 3 and 4 above. For specific procedures refer to Harrelson, Cheryl C., C.L. Rawlins, and John P. Potyondy, *Stream Channel Reference Sites: An Illustrated Guide to Field Techniques*, United States Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-245.

Vegetation Management for Fire Prevention ("fuel reduction"):

1. Aerial view (satellite or airplane photography) if available.
2. In the absence of an aerial view, a landscape; long view showing all or representative sections of the project (bluff, bridge, etc.)
3. Long view (wide angle if possible) showing the project area or areas. Preferably these long views should be from an elevated vantage point.
4. Medium view photos showing examples of vegetation changes, and plantings if included in the project. It is recommended that a person (preferably holding a stadia rod) be included in the view for scale.
5. To the extent possible include medium and long view photos that include adjacent stream channels.

Stream-Sediment Load or Erosion Monitoring:

1. Long views from bridge or other elevated position.
2. Medium views of bars and banks, with a person (preferably holding a stadia rod) in view for scale.
3. Close views of streambed with ruler or other common object in the view for scale.
4. Time series: Photograph during the dry season (low flow) once per year or after a significant flood event when streambed is visible. The flood events may be episodic in the south and seasonal in the north.

PHOTO- LOG FORM

Project:

Location:

Date:

Photographer:

Team members:

Photo #	Time	Photo Point ID	Photo Pt. Description & Location	Bearing to Subject	Subject Description

General Notes or Comments (weather, cloud cover, time of sunrise and sunset, other pertinent information):



Timber Harvest Program

Standard Operating Procedures for Instream Turbidity Monitoring

October 2006

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Purpose

This document provides standard operating procedures for instream turbidity monitoring on forest streams pursuant to the General Conditional Waiver of Waste Discharge Requirements – Timber Harvest Activities in the Central Coast Region (General Waiver). These procedures, when followed correctly, will support the collection of turbidity grab samples or insitu probe measurement data. The data will be used for trend analysis and to determine compliance with Monitoring and Reporting Program R3-2005-0066.

Throughout this document "the discharger" means the landowner and anyone working on behalf of the landowner in the conduct of timber harvest activities including monitoring.

Timing: Monitoring Season

Monitoring shall begin at the onset of timber harvest operations (i.e. tree falling, yarding, and / or roadwork, etc.) and shall be consistent with the Monitoring and Reporting Program (MRP), any conditions set forth within the General Waiver or Waste Discharge Requirements, and the procedures outlined in this document. The turbidity monitoring season begins on or after October 15 as specified in the MRP. You are required to conduct forensic monitoring throughout the entire year as necessary. Monitoring shall continue as specified in the MRP until it is revised or rescinded.

Monitoring Triggers: Rainfall Information

Monitoring events¹ are triggered by rainfall events as prescribed in the MRP and as necessary according to forensic monitoring requirements.

The discharger shall document when and where rainfall data was obtained for each monitoring event on the Timber Harvest Turbidity Monitoring Field Data Sheet (Data Sheet). The Data Sheet may be downloaded from the website at: http://www.waterboards.ca.gov/centralcoast/Facilities/Timber_Harvest/index.htm and then click on "turbidity." Hard copies of the data sheet are available upon request.

Rain gauges used shall represent precipitation at the harvest site as closely as possible. Compare rain gauge readings at the site to published gauges whenever possible.

Locations: Monitoring Sites

Turbidity sampling shall occur at monitoring locations specified in the MRP or identified during forensic monitoring. Identify the monitoring locations for each harvest at the top of the Data Sheet and include the latitude and longitude of the location in North American Datum of 1983 (NAD83) (i.e. decimal degree format dd.dddddd). Latitude and longitude are available at the www.topozone.com website.

Equipment: Turbidimeter / Turbidity Probe

The MRP specifies that a handheld turbidimeter is acceptable for the purposes of measuring instream turbidity. A handheld turbidimeter is either field equipment, equipped with a probe that takes direct turbidity readings from the watercourse, or bench top laboratory equipment that takes a turbidity reading from a sample

¹ A monitoring event is defined as all the turbidity samples or readings taken during the same storm event.

already collected from the monitoring location. Some models of the bench top style turbidimeter are designed to be taken into the field.

Whether a bench top turbidimeter or probe is used, the equipment must report turbidity levels in Nephelometric Turbidity Units (NTUs) and be able to read within a scale of at least 0 – 1,000. Each piece of equipment must be assigned a unique equipment identification number.

Calibration and Accuracy Checks

Turbidity equipment (probe or bench top turbidimeter) must be calibrated within twenty-four hours prior to each sampling event using standard reference materials and following the manufactures instructions. Calibration must include at least two calibration points that are intended to bracket the expected conditions in the field. Calibration data must be recorded on the data sheet and include the equipment identification number, date and time, result prior to calibration, value of calibration standard, and result following calibration.

An accuracy check must be preformed on the turbidity equipment within 24 hours following each sampling event. Accuracy check must include the same calibration points and certified reference materials as were used in the pre sampling calibration. If the readings are not within 5% of the standard value for any of the ranges, the probe or bench top turbidimeter must be recalibrated. Accuracy check data must be recorded on the data sheet and include equipment identification number, date and time, accuracy check result, and value of calibration standard.

Field Collection Procedures

Take turbidity reading with the probe or collect the grab sample away from the stream bank in the main current in a location that best represents the water column. An optimal location would be in a relatively straight reach that is well mixed, with uniform hydraulics, and away from turbulence. Never sample stagnant water.

When wading² to the site try not to disturb bottom sediment. Be careful not to take a turbidity reading or collect water that has sediment from bottom disturbance. Mark the site with flagging, photo-documentation, or other method to ensure that subsequent sampling occurs at the same location.

Probe

The discharger must take a turbidity reading using a probe that has been cleaned according to the manufacture's specifications or collect the sample using a clean sample container.

² A small clean container, such as a bucket, attached to a long handle may be used to collect a sample from a stream if direct access to the bank is difficult or dangerous.

If using a probe, identify a sampling location and place the probe in the stream at least 2.0 cm below the water surface but not more than 4.0 cm below the surface. Allow the probe measurement to stabilize (see manufacturer's instructions) and record the result on the field data sheet.

Grab samples

The sample container must be a plastic, wide mouthed, bottle with a screw top lid. Analyze the samples immediately. If samples will be placed in storage prior to analysis, they must be stored in amber laboratory bottles at 4° C for a time period not to exceed twenty four hours.

All bottles must be cleaned prior to each use according to the following specifications, 1) Wash each sample container with a brush and phosphate-free detergent, 2) Rinse three times with cold tap water.

Prior to sample collection label the bottle with the name of the sampler, location, and the date/time the sample was taken. Identify the sampling location and stand facing upstream. Rinse sample container three times with ambient water before filling with sample. To collect the sample, lower the lip of the bottle **below the surface of the water** and towards the current. Collect the sample with a "scooping" motion to sample the full water column instead of just one spot. (see Attachment 1, Collecting a Turbidity Grab Sample) Promptly³, pour out excess water to leave at least a 1-inch air space so the sample can be re-suspended (by inverting the sample container several times) prior to analysis.

Stage Measurements

At each monitoring location establish a staging location where the substrate is relatively stable. During each sampling event measure stream stage with a yard stick, staff gauge, or staff plate for comparison to future measurements.

Sample Analysis

Perform the sample analysis per the manufacturer's recommendation for the turbidimeter. If performing analysis with a bench top turbidimeter, conduct analysis on three separate sub-samples⁴ from the same bottle and record the median⁵ on the Data Sheet. Always re-suspend the sample by gently inverting the sample bottle several times (do not shake as air bubbles can interfere with your readings) before transferring to sub sample vials to prevent a misrepresentative reading due to settling.

³ This must be done immediately after collecting the sample. Waiting to pour out excess water can create an unrepresentative sample as some material may have already settled.

⁴ If using bench top turbidimeter, all vials for subsamples must be cleaned to manufacturer's recommendations.

⁵ Constituting the middle value in the distribution.

Data Sheet

All sections of the field data sheet must be completed for each monitoring event.

Identify the Timber Harvest Plan (THP) or Nonindustrial Timber Management Plan (NTMP) number, Plan Name, and monitoring year. For NTMPs identify the unit or notice of timber operations (NTO) number.

Identify the monitoring sites with a unique site identification (ID). This ID needs to correlate to the monitoring maps in the MRP. Provide the latitude and longitude of each site in decimal degree format (e.g. 35.345600N 122.678900W).

Identify the type of turbidimeter or probe.

Provide data from pre sampling calibration prior to each monitoring event, including the equipment identification number, date and time, result prior to calibration, value of calibration standard, and result following calibration. Record the name of the person who conducted the calibration.

Provide data from accuracy checks following each monitoring event, including the equipment identification number, date and time, accuracy check result, and value of the standard. Record the name of the person who conducted the accuracy check.

Provide the date and time each sample was taken and the date and time the sample was analyzed. Record the stage height and note any additional information such as problems at the site or any other observations.

Note the rain gauge location reading and time; amount and duration of rainfall; and current weather.

Estimate whether the stream is on the rising or falling limb of the hydrograph.

Reporting Requirements

By November 15 of each year, the discharger must submit an Annual Report to the Central Coast Water Board per the requirements in the MRP and the following:

- ❖ A summary of the water quality monitoring performed during the previous year. Any monitoring described in the summary must also include the data submitted in an electronic format compatible with Excel.
- ❖ A detailed map⁶ meeting the following specifications:
 - In color (if possible).
 - Title stating: "Water Quality Monitoring Locations for THP No. XXXX"
 - All monitoring locations and routes clearly marked with unique site identification tags.
 - A Key or Legend identifying all monitoring locations and routes.
 - North Arrow.
 - Scale
- ❖ Completed Field Data Sheets with data from all monitoring events.

⁶ The map needs to be submitted only once unless monitoring station locations are modified. In the future a map with unique monitoring site tags shall be submitted with the Timber Harvest Information Form and Fact Sheet.

Literature Consulted

Anderson, Chauncey W. "Chapter A6 Field Measurements Version 2.1 – 6.7 Turbidity" National Field Manual for the Collection of Water-Quality Data United States Geological Survey. September 2005.

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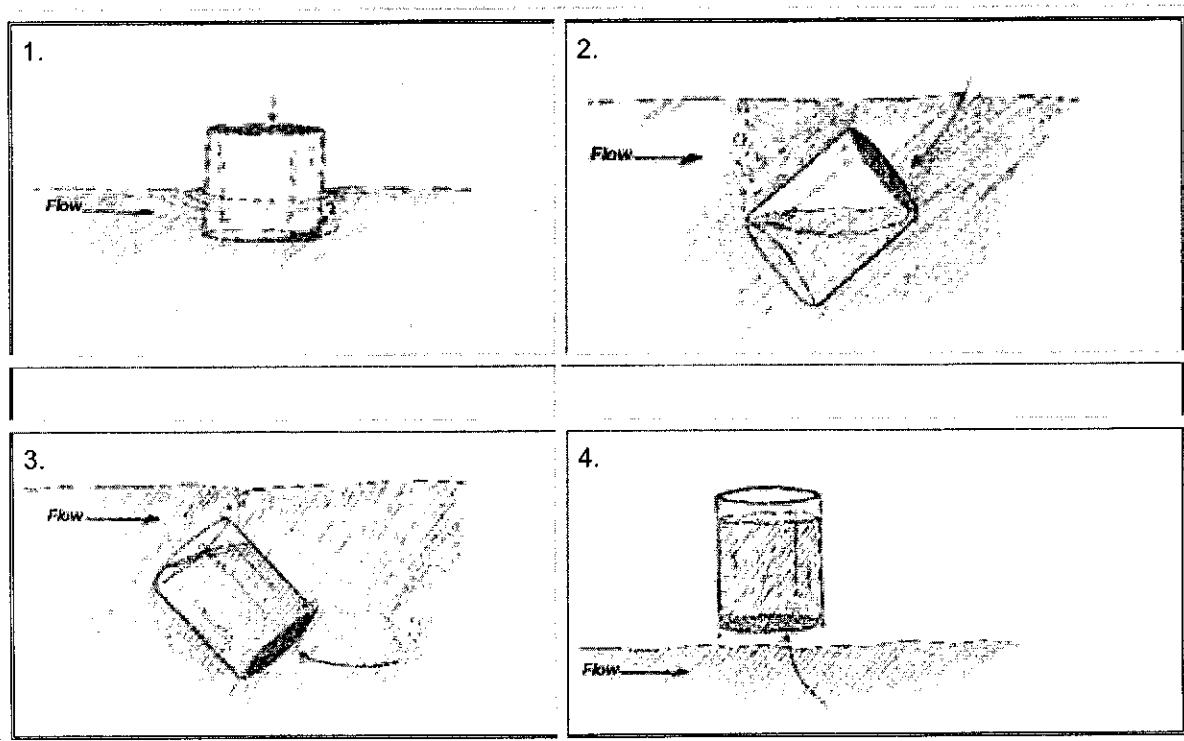
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Getting into position to take a turbidity grab sample.



Taking a water sample.

Turn the bottle into the current and scoop in an upstream direction.

Sketches taken from USEPA "Quality Assurance, Quality Control, and Quality Assessment Measures. Figures 5.2 and 5.3" Volunteer Stream Monitoring: A Methods Manual <http://www.epa.gov/volunteer/stream/vms50.html>